DRUG AND COSMETIC INDUSTRY

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Snow Top
PRECIPITATED CHALK

As one who keeps abreast of the latest developments, you'll want these new circulars on SNOW TOP Precipitated Chalk. Each circular discusses a different property of SNOW TOP and each contains a sample in a cellophane envelope so you can actually see and feel the quality.

You should also have our 48 page booklet "Precipitated Chalk for American Industry." A brief perusal of this literature will quickly show you why this American Precipitated Chalk is gaining in favor with makers of dentifrices, tablets, cosmetics, pharmaceuticals and in every process where chalk is used.

INDUSTRIAL CHEMICAL SALES
DIVISION WEST VIRGINIA PULP & PAPER COMPANY
230 Park Avenue • New York City
35 E. Wacker Drive, Chicago, Illinois
1332 Widener Bldg., Philadelphia, Pa.
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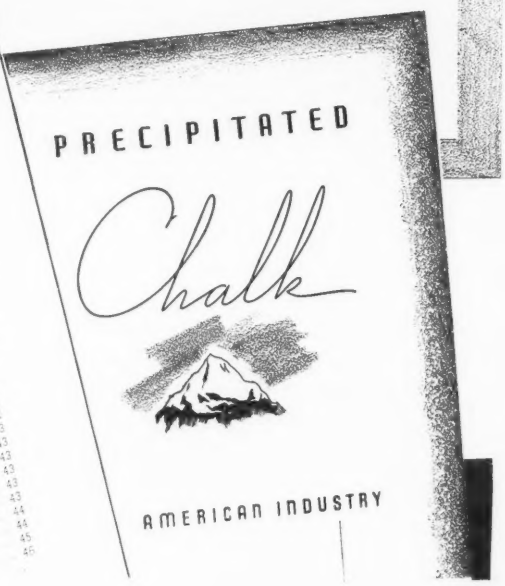

What the Doctor Ordered

for an ailment a year ago, he may not even consider prescribing today. For out of great laboratories able scientists are constantly sending newly discovered, more effective products for the medical profession. Preparations which aid in the laborious and unending struggle against the common enemy . . . disease. The high destiny of these ethical products will not permit haphazard packaging. Each package factor must contribute its share of dependability and professional appearance to the whole. That is why the Phoenix S T Cap is used to seal the foremost ethical products. For to use a colloquial, yet apt expression, its sealing qualities and sleek appearance make it just what the doctor ordered.

PHOENIX METAL CAP CO. Plants: 2444 W. Sixteenth St., Chicago; 3720 Fourteenth Ave., Brooklyn

DRUG AND COSMETIC INDUSTRY

MAY 1939

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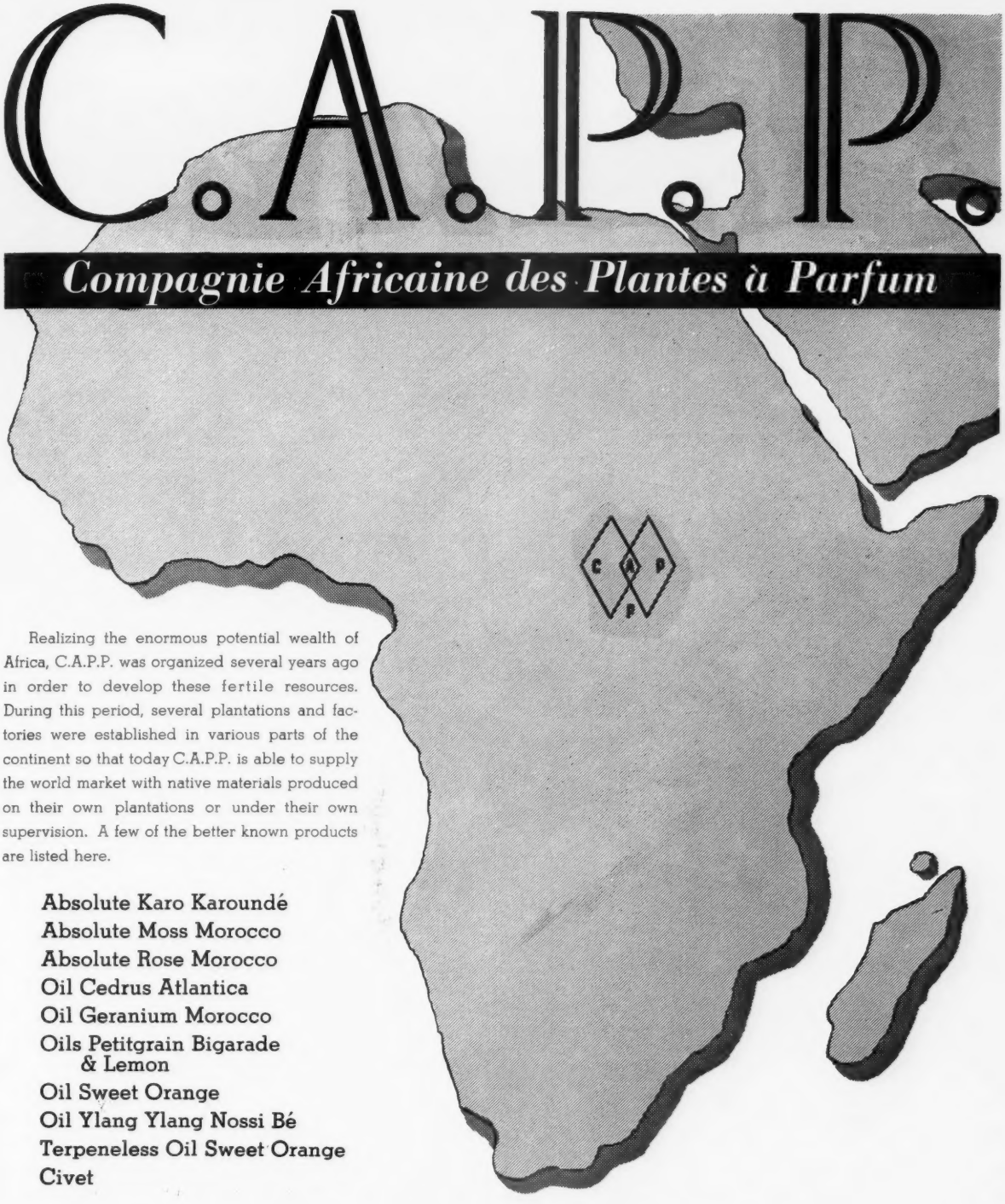

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Convenient

It is just as easy for you to make a modern cream with **TEGIN** as it is for you to phone us for information about it; you merely boil all ingredients and stir until cool.

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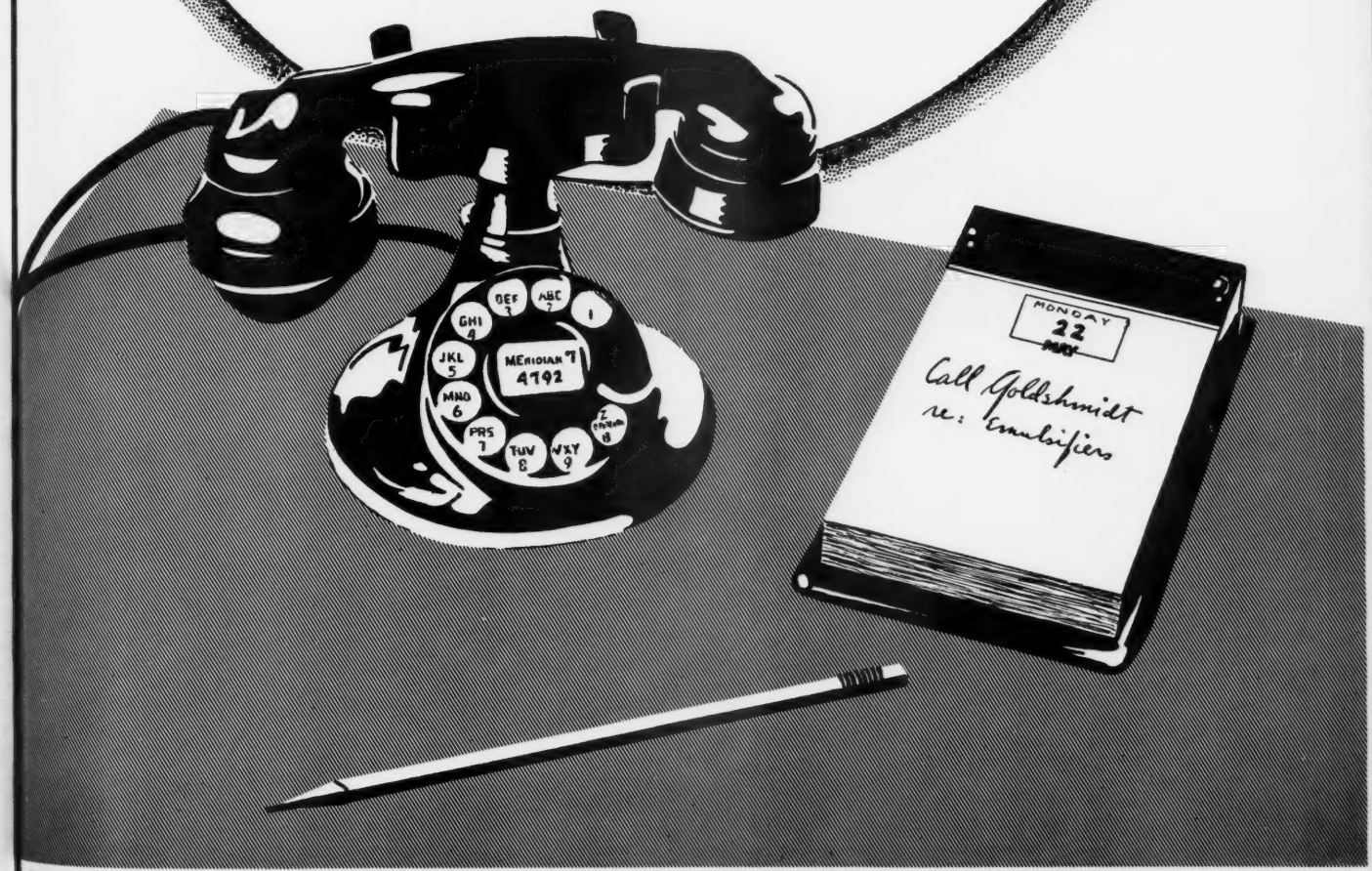

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To our Customers:

On April 5th we celebrated the tenth anniversary of the founding of Sylvania. It is with a feeling of gratitude, not entirely exempt of pride, that we look back to the growth of our organization and business during these past ten years and the development of our cellophanes and other products which we have contributed to the industry.

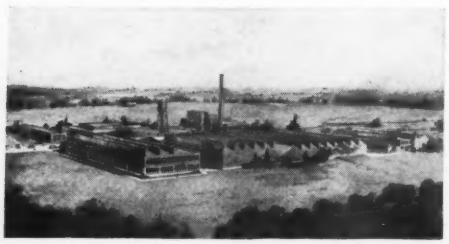
We are, however, most particularly grateful to our customers, to whose loyalty we owe our success in the first place, and whose friendship we so deeply appreciate and continuously strive to deserve.

The New York World's Fair will be opened to the public on April 30th. We extend to members of your organization visiting the Fair this summer a sincere invitation to call at our office so that our members may become more personally acquainted with you. We also invite you to avail yourselves freely of the recently enlarged facilities of our New York offices while here.

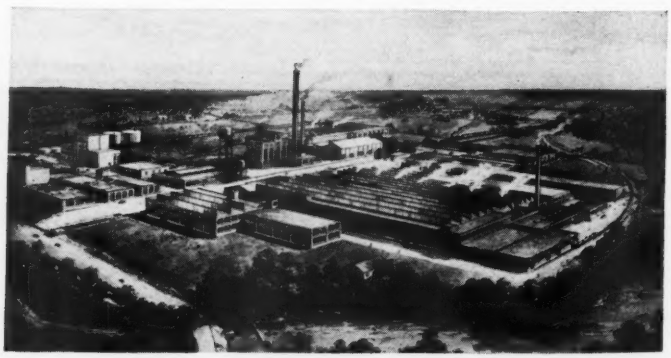
Looking forward to seeing you, we remain,

Sincerely yours,

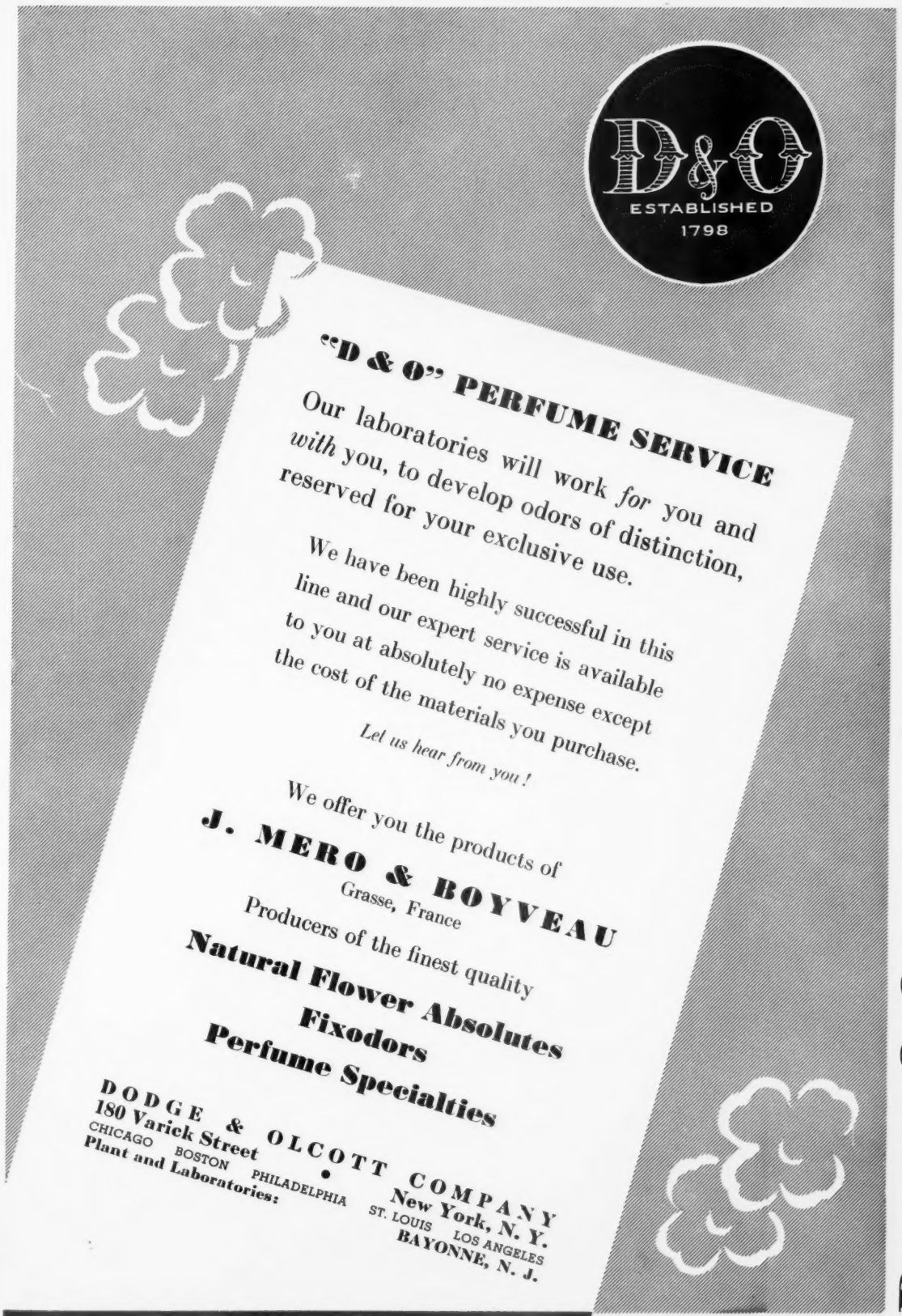
SYLVANIA INDUSTRIAL CORPORATION



1930



1939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ESTABLISHED
1798
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Let us hear from you!
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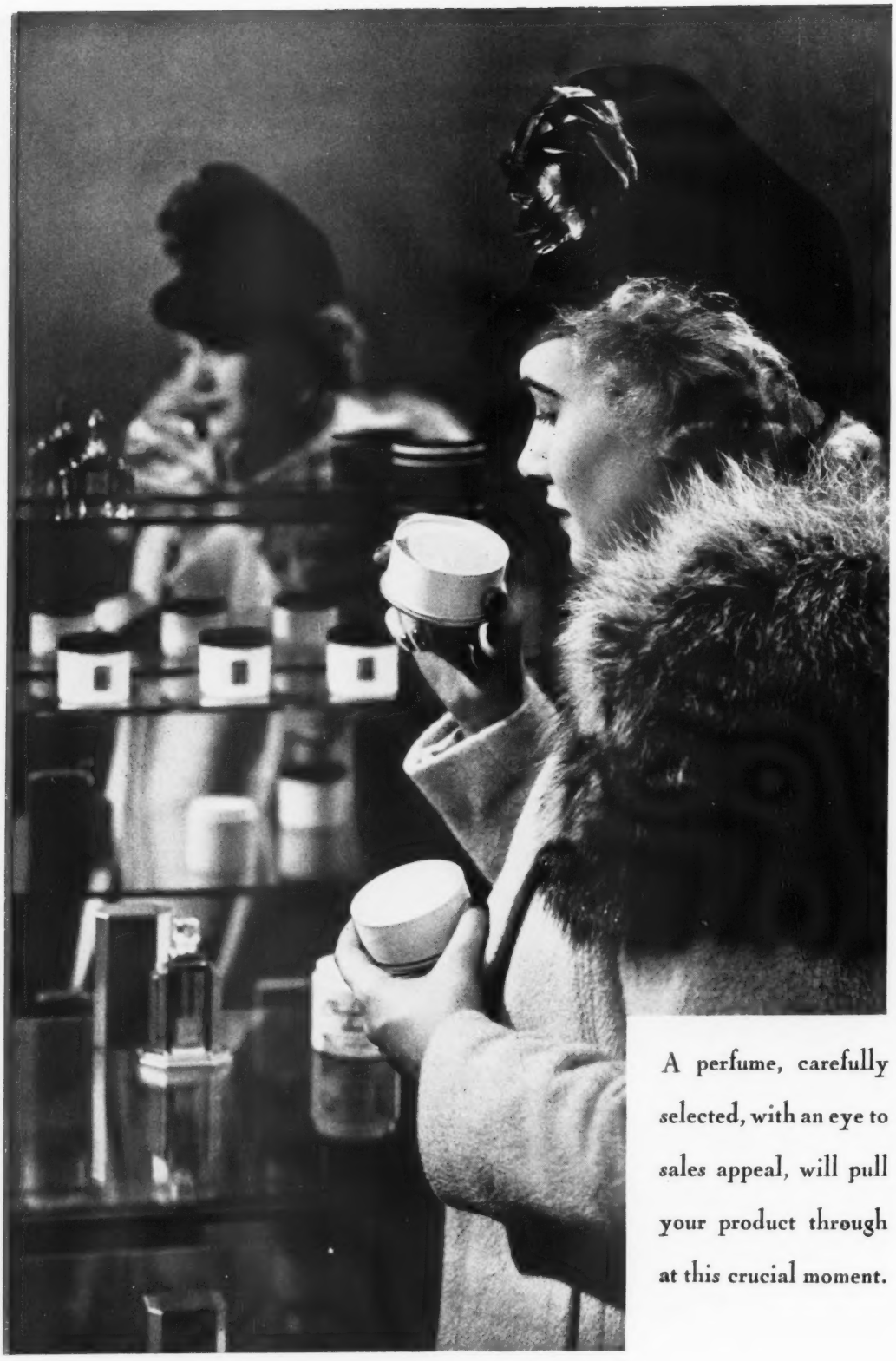

A perfume, carefully selected, with an eye to sales appeal, will pull your product through at this crucial moment.

A little finer . . . .

Two gardens may have been tended and cultivated with equal effort and care, each grew and flourished under the same sun and rain, yet in charm and beauty one stands out far above the other. This is true of homes, of-machines, of perfumes and of many things. There is an indefinable *something a little finer* that makes one stand out. More thought, more talent, more careful planning went into the one. This *something a little finer* lifts a product beyond mere specifications and competition.

VAN AMERINGEN-HAEBLER, INC.

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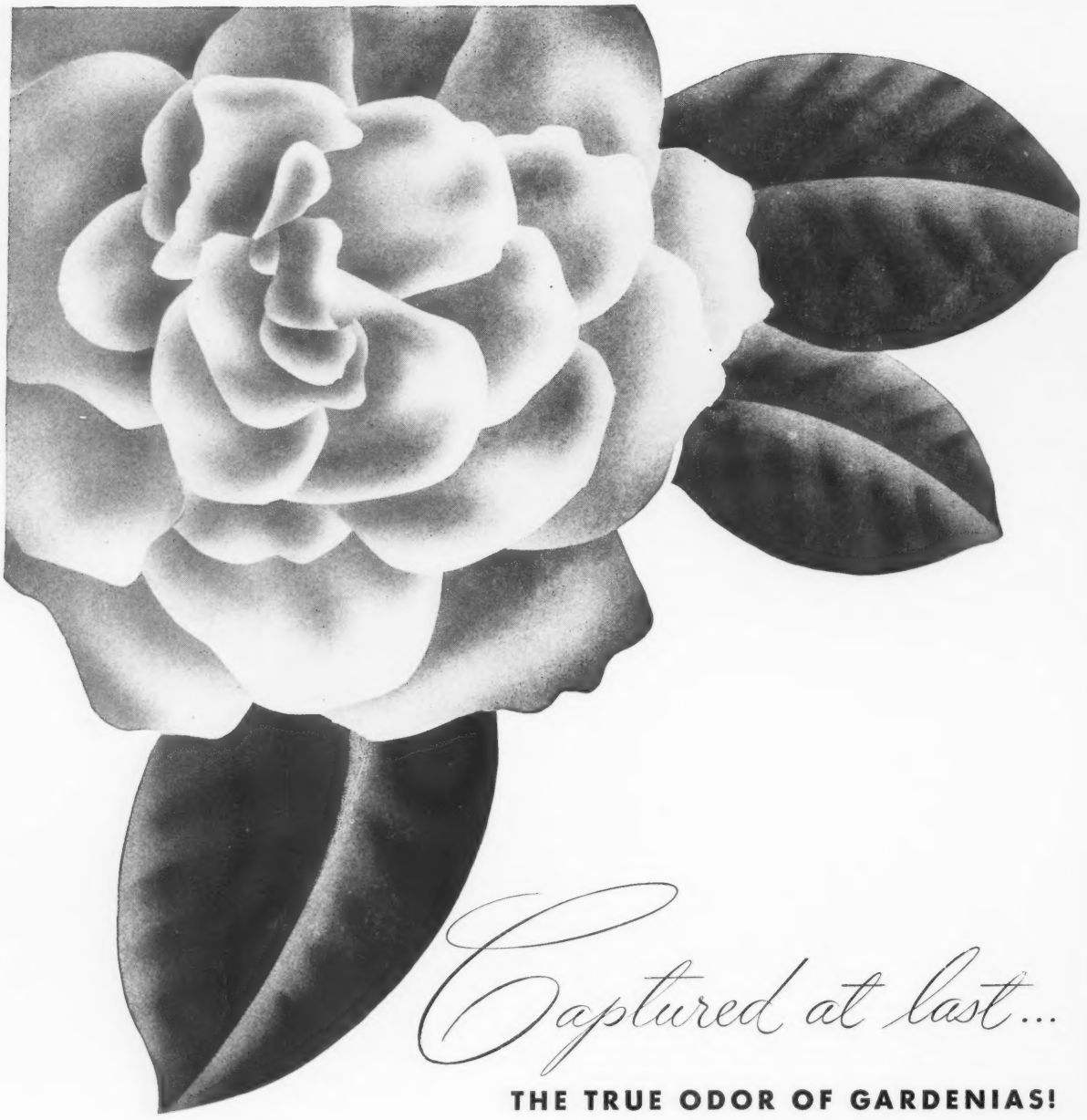

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THE TRUE ODOR OF GARDENIAS!

Fifth Avenue shops say that more women ask for Gardenia perfume than for any floral odor. "And we'd sell a lot more if you could give us one that smelled *exactly* like Gardenias!"

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Gardenia Velva has a sparkling, intoxicating odor . . . smooth and velvety . . . full of life. And the odor *lasts*—for Astrotone* BR, Du Pont's highest quality fixative, has been added.

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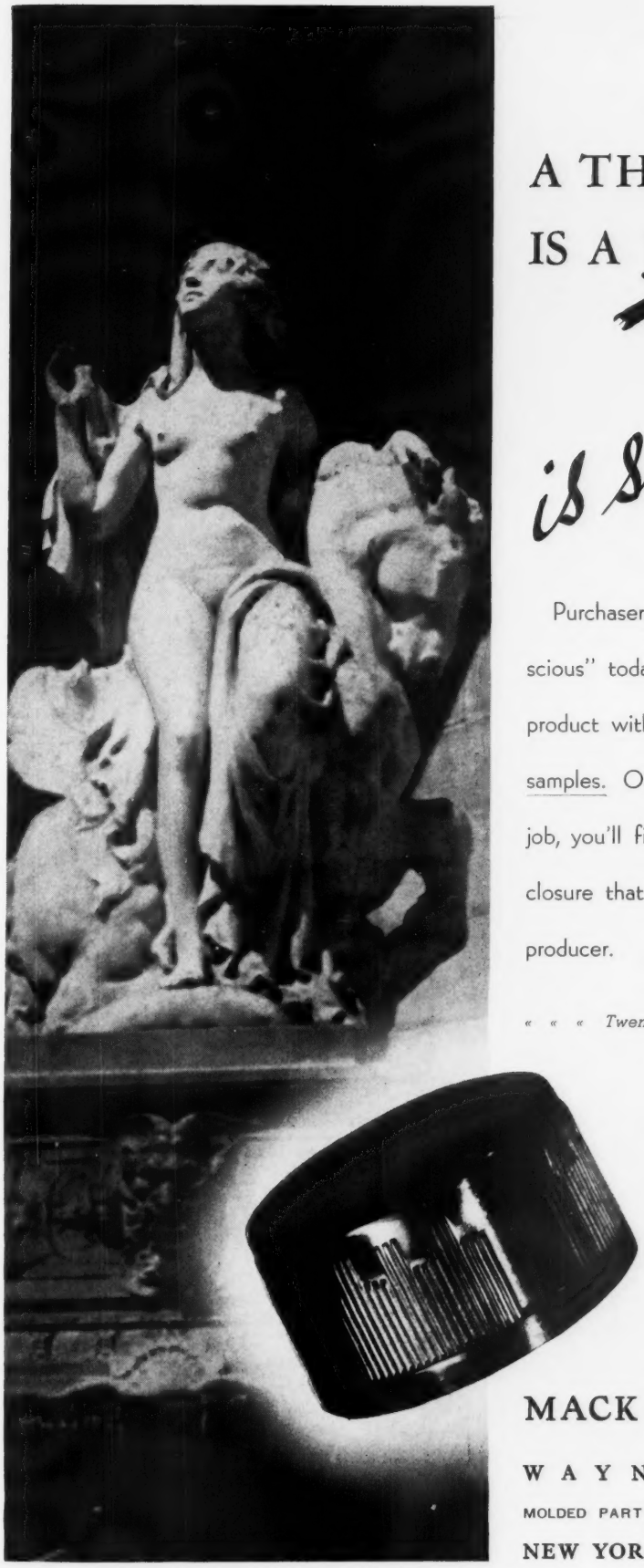
DU PONT

Aromatics



A THING OF BEAUTY IS A JOY ~~FOREVER~~ — KEATS

is Smart business

Purchasers of your product are more "Beauty Conscious" today than ever before. So top off an A-1 product with a smart closure. Write today for stock samples. Or if you need a cap to do a very special job, you'll find MACK ready to help — with a special closure that is truly a thing of beauty — and a sales producer.

« « « Twenty years' experience in molding plastics » » »

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MOLDED PARTS IN BAKELITE, DUREZ, TENITE, BEETLE, FIBESTOS
NEW YORK OFFICE: 11 WEST 42nd STREET

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..AND CONVENIENT

Here is an economical and efficient closure for Talcum Powder or other products requiring a sifter cap---a screw-thread finish insures a tight seal and is easy to assemble.

One hand operation of the oscillating slide makes it a very convenient and practical cap---embodying an obvious principle together with a popular price.

Application to your package will gladly be made on receipt of your containers.

A full range of popular sizes from 22 mm. up is now available.

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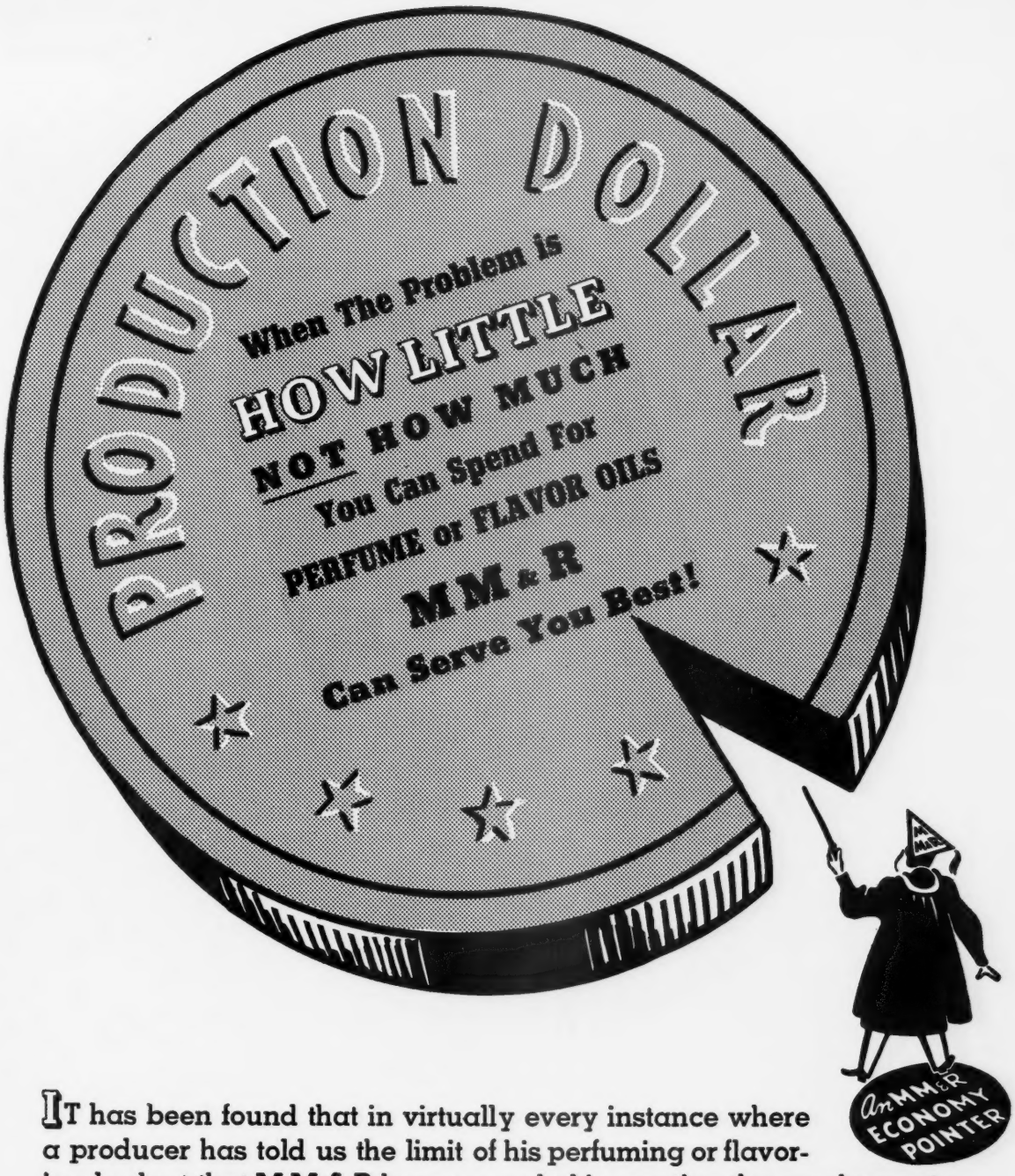

IT has been found that in virtually every instance where a producer has told us the limit of his perfuming or flavoring budget that M M & R has succeeded in meeting the requirements under the allowed production budget. Let us know your requirements and your price limitations. There is reason to believe that we can effect an economy.

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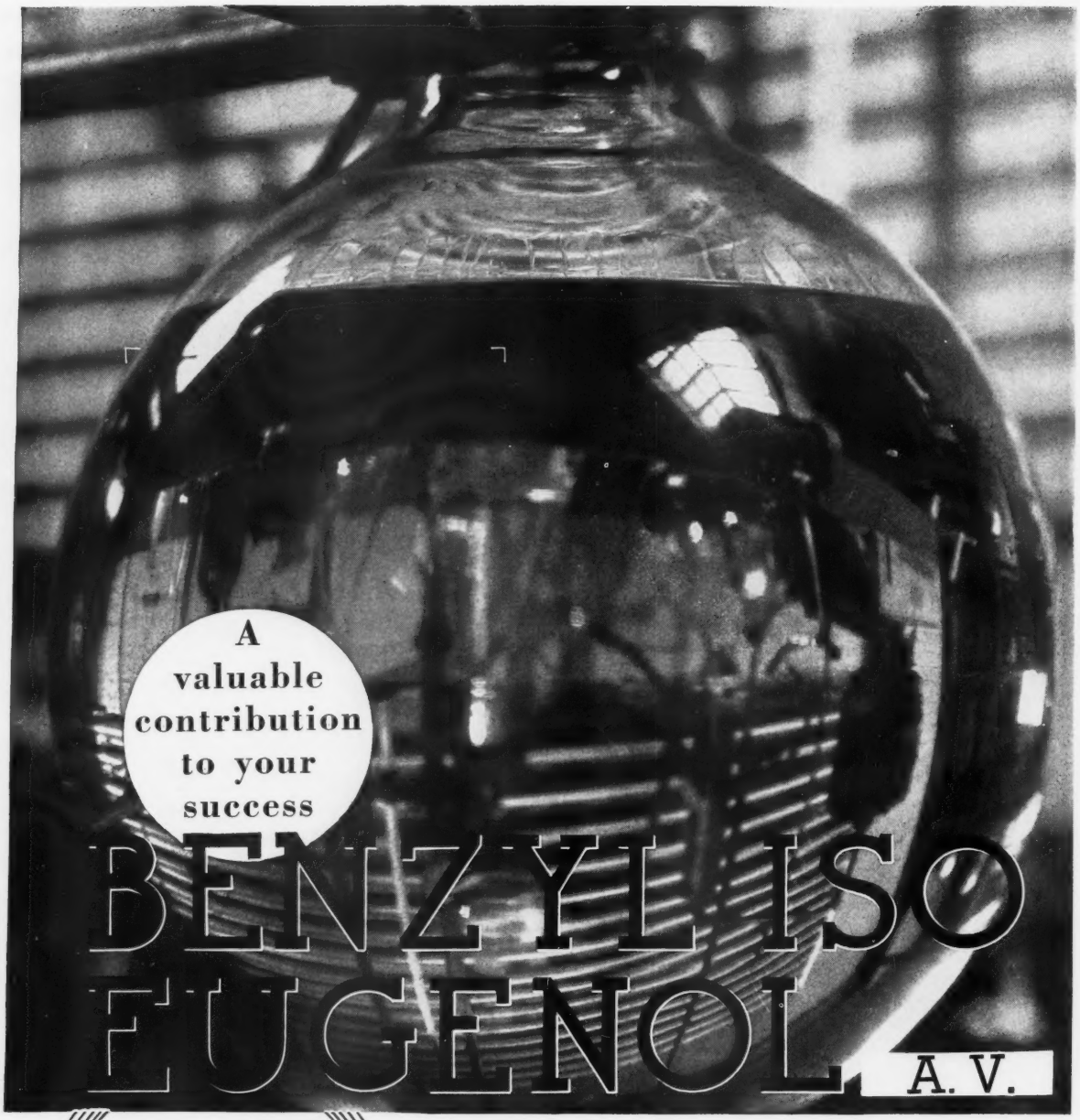

. . . and a secure source of supply » » » *made in America*

Its value has been discovered and appreciated, not only for an obvious use in Carnation, but also as an indispensable ingredient in Dianthus and Lilac, as well as other floral odors. In fact, it enhances almost any composition in which you use it, including fantasy bouquets. In addition to its marvelous spicy sweetness, it imparts excellent fixative value.

Our fine product is, and has been for several years, entirely of domestic manufacture. Our house has long been considered the primary source of supply. Due to an improved method, *the price is right.* Write for sample and prices.

The increased use of this fine chemical justifies every recognition it ever received as a technical achievement in aromatics manufacturing.

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ATLANTIC
THE ATLANTIC REFINING COMPANY
PHILADELPHIA, U.S.A.

KEEPING PACE with changes in the requirements of the industry, Atlantic offers two new grades of low viscosity U.S.P. oil for cosmetic use.

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Write today for our new booklet which describes the enlarged line of White Mineral Oils in detail. . . . The Atlantic Refining Co., Technical Sales Division, 260 S. Broad St., Philadelphia, Pa.

ATLANTIC
WHITE MINERAL OILS U. S. P.

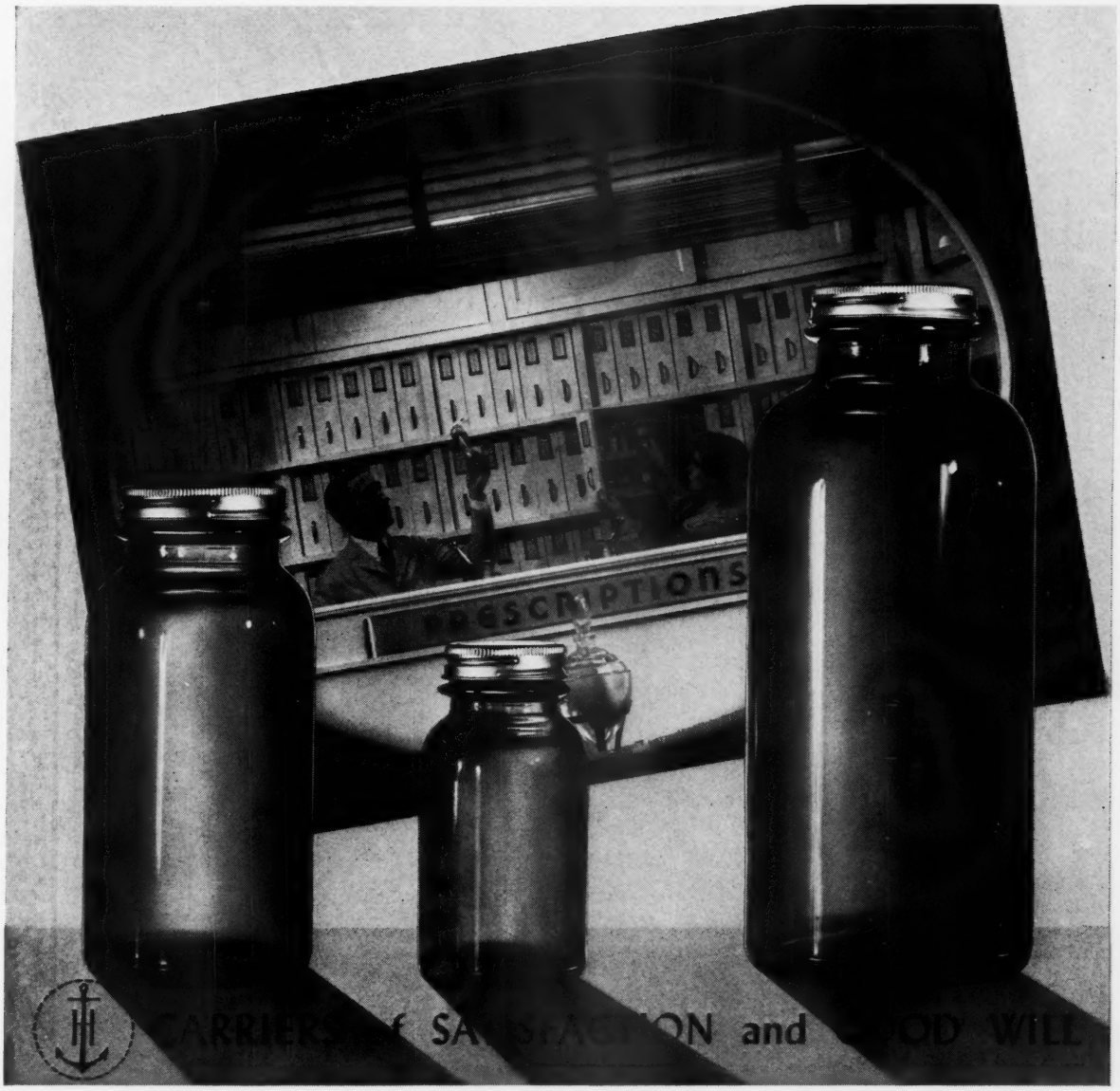
Trade Name		Viscosity S. U. at 100° F.	Average Spec. Gravity at 60° F.	U. S. P. Tests
Atreol	34	335-345	0.885	Passes
Atreol	33	320-330	0.885	"
Atreol	32	310-320	0.884	"
Atreol	21	200-210	0.874	"
Atreol	18	175-185	0.871	"
Atreol	15	140-150	0.866	"
Atreol	13	125-135	0.862	"
Atreol	10	95-105	0.855	"
Atreol	9	80-90	0.850	"
Atreol	*7*	*65-75*	*0.845*	"
Atreol	*6*	*50-60*	*0.840*	"

The pour point of all Atlantic Atreols is 10° F. or lower

TECHNICAL WHITE OILS

Trade Name		Viscosity S. U. at 100° F.	Spec. Gravity at 60° F.	Color Saybolt
Ultrol	8	80-90	0.852	Plus 30
Ultrol	*7*	*65-75*	*0.847*	*Plus 30*
Ultrol	*5*	*50-60*	*0.842*	*Plus 30*

ATLANTIC WHITE OILS



THE public looks to the pharmacist as the dispenser of health-bringing prescriptions and remedies—but he is the last link in the chain. Back of him are the products and ingredients he uses—your products—their purity and quality the source of much of the confidence and good will he commands.

As for the containers in which drugs, pharmaceuticals and chemicals are packed, they should be equally as high grade as the products inside. Because a clean, well made bottle of sparkling, lustrous glass is, in itself, confidence inspiring, evidence of product excellence. Anchor Hocking makes a full line of finely made drug containers—a great variety of styles and sizes, crystal and amber. For example, the Wide Mouth Rounds illustrated here are available in 21 different capacities ranging from 3 cc. to 950 cc. We will gladly submit samples of any stock types of P & P ware in which you may be interested or suggestions for a private mold design, if you prefer. Just write us. ANCHOR HOCKING GLASS CORPORATION, Lancaster, Ohio.

PROPER SEALING—An efficient closure, one that gives complete protection to the product and which is easy to apply and remove is of the utmost importance. Anchor Caps are made in many types, for all purposes and products; let us specify the one best suited to your needs.

ANCHOR HOCKING GLASS CAPS
-an unbeatable combination

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Bulgarian

Otto extra alpha
Otto anatolian
Otto imitation
Absolute
Superessence
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IT WILL BE A SUCCESS

IN A KIMBLE GLASS VIAL

You can take the guess-work and doubt out of your packaging and sampling plans—right at the beginning—by selecting a KIMBLE GLASS VIAL for the job. Actual figures show that products packaged in these colorful, sales-winning vials become outstandingly successful in record time—and YOURS should be no exception.

Perfectly transparent, fully annealed and shock-resisting, adaptable to all modern types of closures and labelling, KIMBLE GLASS VIALS capture the eye and win the approval of every shopper who appreciates convenience, safety and sanitation.

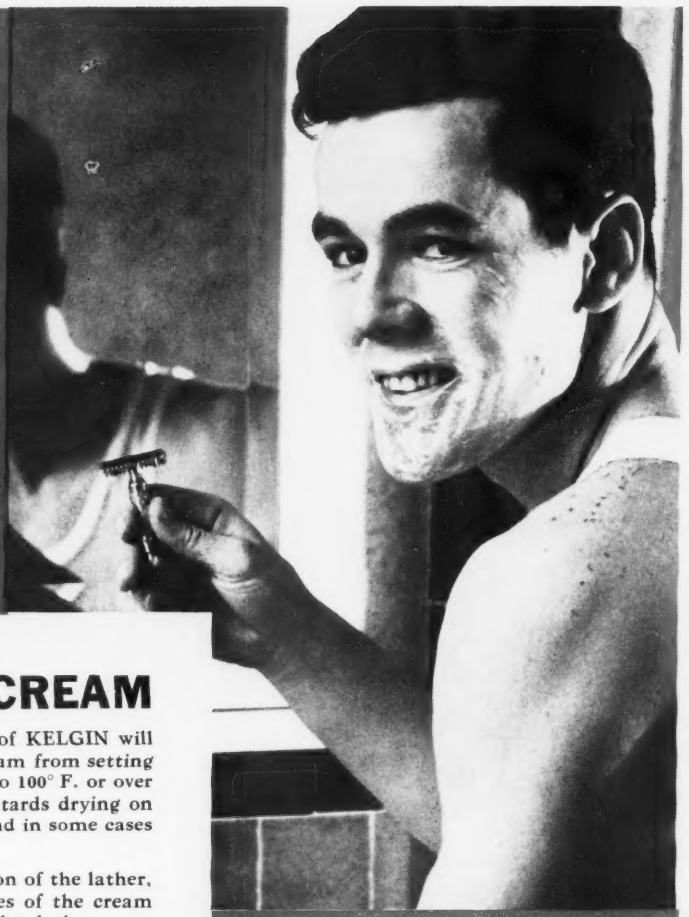
If you have a sampling problem or are planning a new package for your line, you can't afford to overlook the unlimited possibilities of these "miniature show-windows." Consult Kimble FIRST—and assure the packaging success you are anticipating!

• • • *The Visible Guarantee of Invisible Quality* • • •

KIMBLE GLASS COMPANY • • • • VINELAND, N. J.

NEW YORK • • CHICAGO • • PHILADELPHIA • • DETROIT • • BOSTON

WHY USE KELGIN in SHAVE CREAMS ?



. . . in SHAVING CREAM

AS little as 10% of a 2% solution of KELGIN will *definitely* PREVENT the shaving cream from setting up or becoming stiff when heated to 100° F. or over . . . It stabilizes the lather and retards drying on the skin . . . very little glycerine and in some cases NONE is required.

. . . KELGIN quickens the formation of the lather, increases the hydrophyllic properties of the cream and reduces the bubble size in the lather . . . KELGIN stabilizes the lather. Even though it will eventually dry, *the lather does not shrink in drying.*

. . . in *Brushless* SHAVE CREAM

KELGIN acts as a stabilizer for the emulsion . . . makes the cream easier to spread . . . eliminates "waxy" after feeling . . . permits perfect "rub-in" of balance of cream after shave . . . improves free-rinsing qualities . . . supplies razor with well-lubricated surface . . . lowers solids content without affecting the body or effectiveness of the cream . . . imparts a definite gloss or finish to the preparation thus improving appearance . . . *no glycerine is needed.*

Our Technical Staff will gladly cooperate with you in the use of KELGIN. All work done is held in strict confidence.

Try KELGIN

in these products, too:

TOOTH PASTE
HAND CREAM
FACE CREAMS
HAND LOTION
ROUGE
BUBBLE BATH
LIQUID FACE POWDER
GREASELESS OINTMENT
SUN TAN LOTION
GELS and MUCILAGES

. . . and wherever a hydrophyllic colloid is required

KELGIN
COSMETIC AND PHARMACEUTICAL COLLOID

KELCO COMPANY, 31 Nassau St., NEW YORK
75 E. Wacker Drive, CHICAGO — 530 West 6th St., LOS ANGELES
MANUFACTURERS of QUALITY ALGINATE PRODUCTS

HOW DO YOU KEEP YOUR COMPLEXION SO SATIN SMOOTH, MARY?
THAT'S EASY. I ALWAYS USE A GOOD FACE POWDER. THE POWDER I AM USING NOW *NEVER* LETS SHINE THRU AND ALWAYS RESISTS RAIN OR WIND.

P. S. HER FACE POWDER IS MADE *with* FACE POWDER BASE Z

For covering power...for adherence ...for quality of slip...for invisibility ...FOR MORE SALES.

AROMATICS DIVISION
GENERAL DRUG COMPANY

170 Varick St., New York
9 S. Clinton St., Chicago
Transportation Bldg., Los Angeles
907 Elliott St. W., Windsor, Ont.

Agfa

Samples Upon Request

INFORMAL CATALOG PAGES

No. 6 of a series showing the variety of Carr-Lowrey stock bottles suitable for drug, cosmetic and similar products.

STYLE 356—Available in seven sizes

DESIGN PATENT 92,413

Capacity	Finish
½ oz.	425-13 mm.
1 oz.	400-18 mm.
2 oz.	400-20 mm.
3 oz.	400-22 mm.
4 oz.	400-22 mm.
8 oz.	400-28 mm.
16 oz.	400-30 mm.

Sizes illustrated are underlined.

STYLE 290	2 oz.*	400-43 mm.
STYLE 387	3 oz.*	400-53 mm.
STYLE S-228	1 oz.*	425-15 mm.
STYLE W-80	1 oz.*	425-15 mm.
STYLE 986	2 oz.*	400-38 mm.
STYLE 373	9 dr.*	400-33 mm.
STYLE 394	3½ oz.*	400-28 mm.
STYLE 307	4¼ oz.*	400-30 mm.

★ Not regularly carried in stock. Ask us for quotations.

CARR-LOWREY Glass Co.

FACTORY AND MAIN OFFICE: BALTIMORE, MARYLAND

NEW YORK OFFICE: 500 Fifth Avenue, Phone: Chickering 4-0592
CHICAGO OFFICE: 1502 Merchandise Mart, Phone: WHitehall 4326

290 387

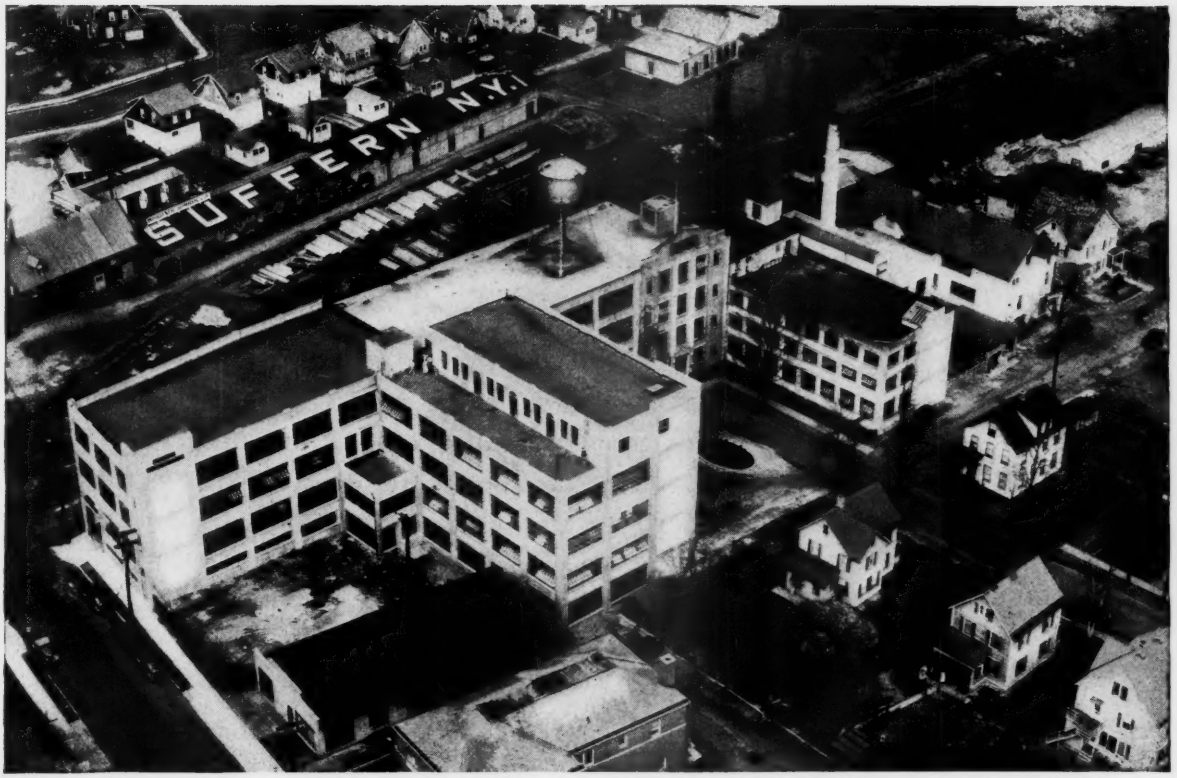
S-228 W-80

986 373

394 307

STYLE 356

This series of informa catalog pages is being pub lished to facilitate you selection of the right stoc bottle for your particula need. We suggest you fi this page for future refe ence. ● New sizes are co stantly being added to ou line. If you want a size no listed for any style illu trated, ask us for quota tions on your requirement



YOU ARE INVITED

TO INSPECT THE PLANT WHERE APLI PRODUCTS ARE MADE

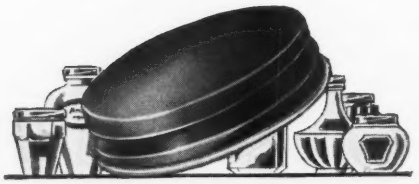
The new Federal Food, Drug and Cosmetic Act gives FDA officials the right to inspect any and all manufacturing plants. APLI *has always welcomed such inspection*—not only by the government, but by any other interested parties. • This mammoth, modern factory is situated in the clean countryside. It is staffed with a high grade of intelligent and happy workers. • Strict sanitary standards are enforced here. Exacting laboratory control insures that formulae are followed with scientific precision, and uniformity maintained. • Long lines of the latest automatic machinery keep production moving along at maximum efficiency—at lowest cost—and assure prompt deliveries. • We believe that when you see this up-to-date plant, you will agree with the many visitors who say: "This is *truly* a model for the industry!" • For more than seventeen years most of America's leading cosmetic houses have had their products made by APLI. Despite adverse conditions in some localities, all APLI clients report their 1939 sales are well ahead of the general trend. To find out how we can help *your* sales, write Mr. A. E. Mullen. No obligation, of course.

LIPSTICKS APLI · ROUGE SUPREME · FACE POWDER APLI · MASCARA APLI · EYE SHADOW APLI

AMERICAN PERFUMERS' LABORATORIES, INC.

MAKERS OF THE WORLD'S FINEST COSMETICS · PRIVATE BRANDS EXCLUSIVELY

30 ROCKEFELLER PLAZA, NEW YORK, N. Y. (IN CANADA: 1015 ST. ALEXANDER STREET, MONTREAL, QUEBEC)



Better Sealing for Your Product

You asked for it . . . and we gave it to you, more than seven years ago. The Deep Hook Thread construction of Crown Screw Caps completely revolutionized all previous conceptions of sealing efficiency for this type of closure.

Because of this patented thread formation, Crown Screw Caps spin on the glass thread easier. That means faster production. They seal tighter with the same application force. That means greater security for your product. They are easier to remove. That means convenience for your customers. In fact, Crown Screw Caps do everything that good screw caps *should* do.

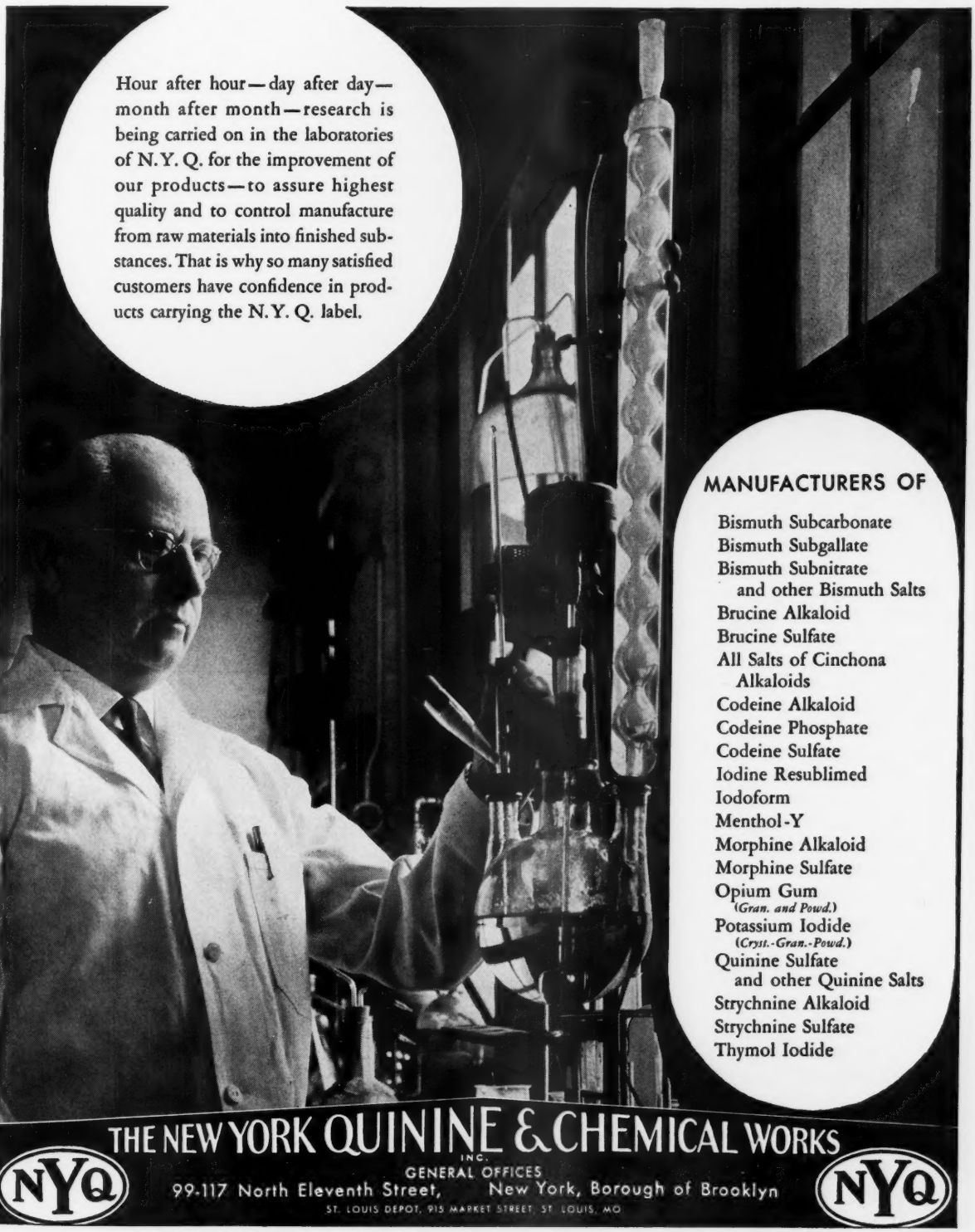
Samples and prices are yours for the asking. Just write and tell us the size you want.

CROWN CORK AND SEAL CO. • BALTIMORE, MD.
World's Largest Makers of Closures for Glass Containers

CROWN SCREW CAPS

"MAN-HOURS OF RESEARCH"...

Do you realize how many are spent in the constant improvement of N. Y. Q. products?



Hour after hour—day after day—month after month—research is being carried on in the laboratories of N. Y. Q. for the improvement of our products—to assure highest quality and to control manufacture from raw materials into finished substances. That is why so many satisfied customers have confidence in products carrying the N. Y. Q. label.

MANUFACTURERS OF

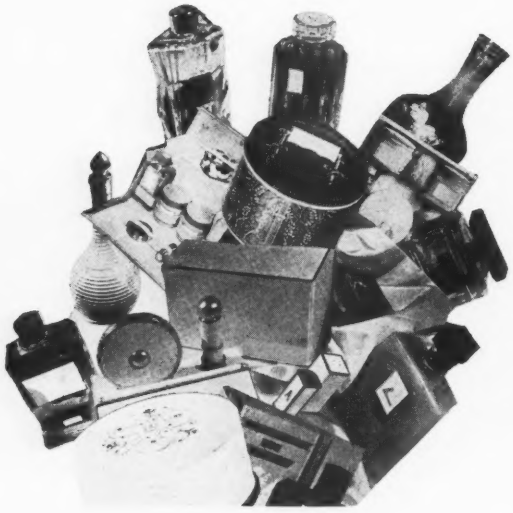
- Bismuth Subcarbonate
- Bismuth Subgallate
- Bismuth Subnitrate and other Bismuth Salts
- Brucine Alkaloid
- Brucine Sulfate
- All Salts of Cinchona Alkaloids
- Codeine Alkaloid
- Codeine Phosphate
- Codeine Sulfate
- Iodine Resublimed
- Iodoform
- Menthol-Y
- Morphine Alkaloid
- Morphine Sulfate
- Opium Gum (*Gran. and Powd.*)
- Potassium Iodide (*Crystl.-Gran.-Powd.*)
- Quinine Sulfate and other Quinine Salts
- Strychnine Alkaloid
- Strychnine Sulfate
- Thymol Iodide

THE NEW YORK QUININE & CHEMICAL WORKS INC.

GENERAL OFFICES
99-117 North Eleventh Street, New York, Borough of Brooklyn
ST. LOUIS DEPOT, 915 MARKET STREET, ST. LOUIS, MO

NYQ NYQ

PERFUMES FOR ALL PURPOSES



Whatever your perfume needs–
Whatever your price limit––

DREYER has a perfume for you. Let our laboratory help you select the proper odor for your individual product. Below we have listed some of our all-purpose odors in the low price range. Other types may be had on request as we have a complete selection of popular odors in stock.

Presenting

DREYER'S ALL PURPOSE PERFUMES

$2.50 PER POUND

Rose #1158
An ideal Rose for creams, powders, talc, perfumes, etc.

Jasmin #2856
An ideal Jasmin for creams, powders, talc, perfumes, etc.

Lilac #3478
An ideal Lilac for creams, powders, talc, perfumes, etc.

Fougere #2790
An ideal Fougere for creams, powders, talc, perfumes, etc.

P. R. DREYER INC.

119 WEST 19th STREET, NEW YORK, N. Y.

CHICAGO OFFICE: 325 WEST HURON STREET

Also 35 representatives covering principal cities of the United States and Europe

We will be glad to send you a reprint of above illustration (17¼ x 8½ without advertising) upon request. Please mention this publication.

IT'S THE FAIR THAT FARE THE BEST

● This is Fair Year! New York and San Francisco will cater to millions. Owens-Illinois is proud of its exhibits at both. Illustrated at the left is the Glass Center—the Fair home of Owens-Illinois. Here you can see miracles worked in glass before your own eyes. Be sure to visit us. The main illustration shows another exhibit—The Libbey Building at the World's Columbian Exposition at Chicago in 1893.

● Whether it's Beauty on the Boulevard or your package on a shelf—it's the fair, the bright, modern and attractive that fare the best.

And when it comes to attractiveness in a package, there's nothing that compares in eye appeal with Glass. Here is a thoroughly adaptable packaging material that in its final form has undergone tremendous improvements. Shipping weights have been drastically reduced . . . strength has been increased, and modern design makes the most of the sparkling display appeal of Glass.

There's profit in a modern salespackage—a story that any Owens-Illinois representative will be glad to give you in detail. He is backed by broad experience and a group of packaging experts who have worked modern miracles with glass containers. Talk to the O-I Representative. No obligation is implied or entailed. Owens-Illinois Glass Company, Toledo, Ohio.

OWENS-ILLINOIS "FIRST IN GLASS"

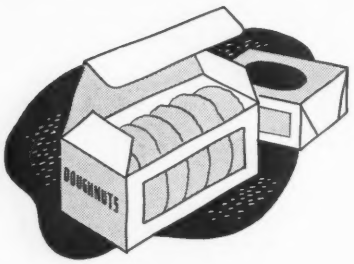
JUST TO GIVE YOU AN IDEA OF THE MANY USES FOR

Ridgelo

CLAY COATED

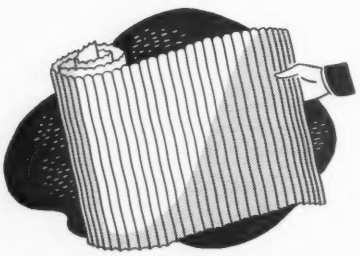
MERCHANDISE CARDS

These colorful little cards to which are attached many small products have become important promotion fixtures for nationally advertised articles. *Strength* of fold helps them to stand the gaff when small tabs or metal staples are used. A *smooth printing surface* makes them clean and attractive therefore worth specifying on low-cost Ridgelo Clay Coated boxboard.



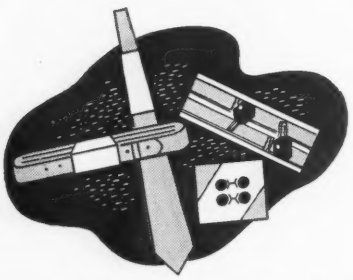
BAKED GOODS CARTONS

The recent adoption for fresh baked products of the principle of moisture-proof as well as greaseproof packaging has made these foods most attractive. Ridgelo offers a protective material for such cartons consisting of a greaseproof paper laminated with a heavy coat of moisture-resistant adhesive to a carton board. Rolls, cakes, doughnuts, stay fresh much longer now.



DISPLAY MATERIALS

Increasing is the demand for unique window and store display materials. Here is one of the newest adaptations obtained by applying a special, bright Ridgelo Clay Coated cardboard in fluted form to a strong back. This article needs extra high lustre, light-fastness and flexibility. Ridgelo experience helps make this product successful in a variety of bright colors.



FOLDERS FOR TIES, BELTS, NOVELTIES . . .

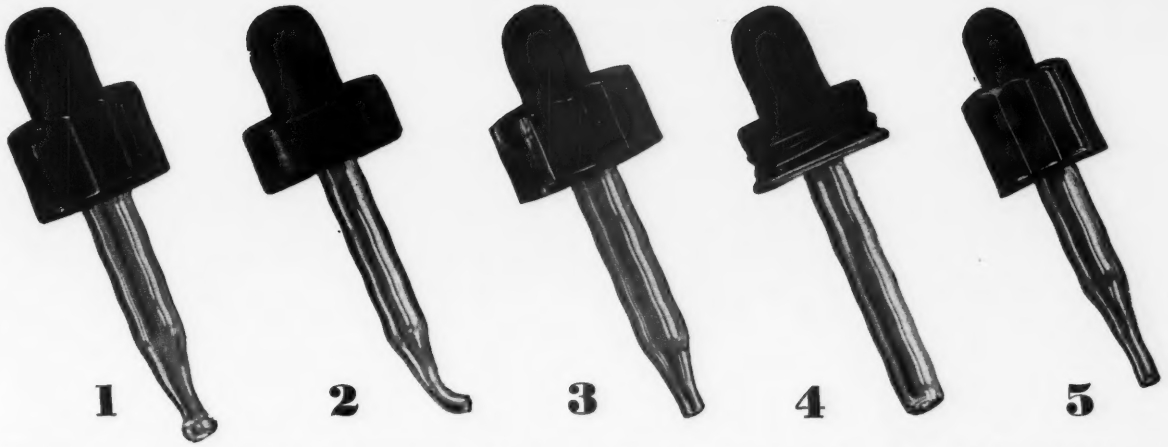
Many articles need a tough, attractive folder to identify the brand, give instructions for care, describe features — what not! These folding tags are often of a special new grade developed by Ridgelo. Thin, rugged, finished with a beautiful metallic coating or a distinctive color, they are becoming a practical necessity for building sales of quality merchandise.

Perhaps your type of product isn't mentioned here but we can make packaging cardboard that will fill your requirement specifically. Our laboratory and selling service are at your disposal.

LEADING SUPPLIERS TO INDEPENDENT CONVERTERS

MADE AT RIDGEFIELD, N. J. BY LOWE PAPER COMPANY

Representatives E. C. Collins, Baltimore • Bradner Smith and Company and Mac Sim Bar Paper Company, Chicago
H. B. Royce, Detroit • Blake, Moffit & Towne and Zellerbach Paper Company, Pacific Coast • A. E. Kellogg, St. Louis



1 — Non-rolling, extra depth, bakelite cap; non-swelling, Amekine synthetic rubber part, without strong odor; Saftee ball glass.

2 — Double shell metal cap; special thin flange rubber part; special bent glass.

3 — Regular or acid resisting plastic cap; regular rubber part in various colors; semi-blunt glass.

4 — Single shell metal cap; clutch rubber part; tooled blunt glass.

5 — Fancy colored beetle cap; midget rubber part; regular straight glass.

Patented in U. S. A. Canada, Great Britain, and other countries

NEW!

Modernistic Functional and Distinctive

The "New Perfection" dropper bottle now offers a distinctive new feature, a slightly concave back, to make the bottle lie flat, face up, for greater speed in labeling. Front is designed to provide largest possible label space, so important with such small bottles.

We can supply you with a distinctive package without your going to mold expense, completely assembled, in four colors of glass, Amber, Blue, Clear or Green, in six sizes, 2 cc., 1-8, ¼, ½, 1 and 2 ounces.

New Perfection
DROPPING PARTS

When your product is put up with a NEW PERFECTION dropper fitment, the physician recognizes the quality, and prestige is gained by you. . . .

When the pharmacist sells your product, he, too, recognizes the quality; he knows the dropper parts will give absolute satisfaction; that there will be no complaints on this score. The customer, too, is impressed with the quality and perfect functioning of the dropper assembly, its never failing strength, tightness and convenience.

NEW PERFECTION is offered in a wide variety of styles, colors, sizes, shapes and materials to lend distinction and individuality to your product. It is easy to satisfy esthetic as well as practical considerations when you use NEW PERFECTION.

Tell us about your needs and let us submit, without obligation on your part, samples, suggestions and prices.

PENNSYLVANIA GLASS PRODUCTS CO.

"GLASS GOODS OF THE BETTER KIND"

410-412 NORTH CRAIG STREET PITTSBURGH, PA. U. S. A.

METHYL SALICYLATE

U. S. P.

A favorite flavor with the American public.

Rely with confidence on the uniform purity of the Heyden brand to win increased consumer acceptance for your products.

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SALOL U. S. P.

CALCIUM SALICYLATE

STRONTIUM SALICYLATE N. F.

MAGNESIUM SALICYLATE

POTASSIUM SALICYLATE

FINE HEYDEN CHEMICALS

SODIUM SALICYLATE U. S. P.

Large Crystals
Small Flo-crystals
Powder
Fine White Color and Complete Solubility

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ACETYLSALICYLIC ACID U. S. P.

Crystals and Powder

ACETYLSALICYLIC ACID

10--16--20% Starch Granulations

SALICYLIC ACID U. S. P.

Pure Crystals and Powder

HEYDEN CHEMICAL CORPORATION

NEW YORK—50 Union Square

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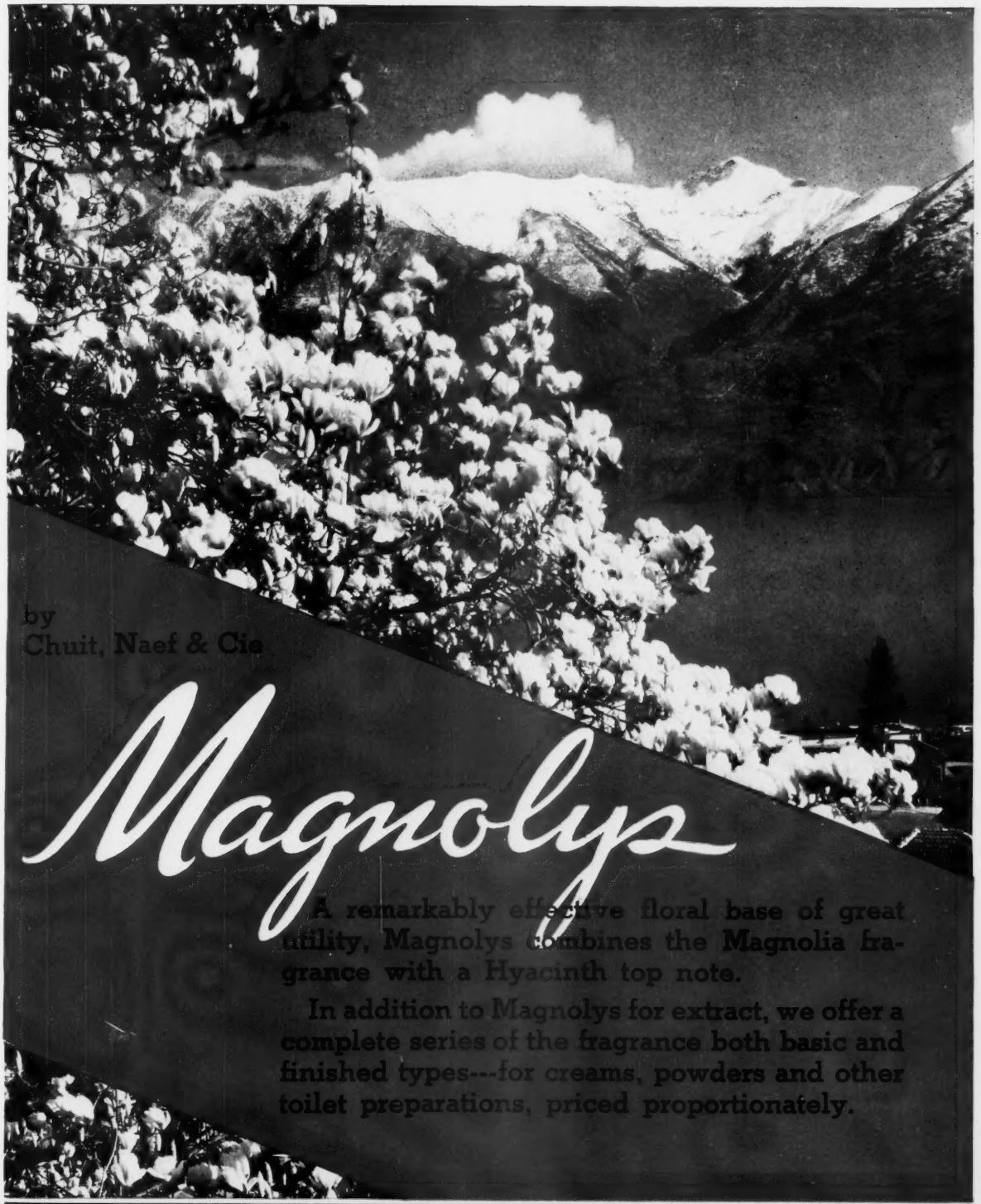


by
Chuit, Naef & Cie

Magnolys

A remarkably effective floral base of great utility, Magnolys combines the Magnolia fragrance with a Hyacinth top note.

In addition to Magnolys for extract, we offer a complete series of the fragrance both basic and finished types---for creams, powders and other toilet preparations, priced proportionately.

Firmenich & Co., Inc.

135 FIFTH AVE., NEW YORK

GATHERING

of BOTANICALS is an ART

. . . Passed on from Generation to Generation of Penick Gatherers

Through generations, Penick collectors have passed on to their families the art of medicinal plant collection and identification—knowledge of the right season to gather for a maximum of active principles, how to remove adhering soil, how to dry plants correctly. More than two hundred Penick botanical drugs are gathered in the beautiful Blue Ridge Mountains of North Carolina.

The gatherers bring the botanicals to the Penick warehouse at Asheville, North Carolina. Today over fifteen hundred natives gather roots, barks and herbs during the harvesting season. In the collection house, the materials are carefully hand picked, rewashed, graded and thoroughly dried. Curing is completed in open-air drying sheds. An experienced manager supervises each process through to the time the different grades and qualities are separated, and samples sent to Penick control laboratories for examination.

S. B. PENICK & COMPANY occupies the unique position of being the only botanical miller and manufacturer to derive the majority of its domestic botanicals directly from the gatherers in the producing districts.

A family of Penick gatherers splitting roots to insure thorough drying.

Available from One Reliable Source are:

GUMS — FISH LIVER OILS

EXTRACTS — ALKALOIDS

CRUDE BOTANICALS

INSECTICIDE BASES

COSMETIC RAW MATERIALS

S. B. PENICK

132 Nassau Street, New York

THE WORLD'S LARGEST BOTANICAL DRUG HOUSE

MANUFACTURE

of PENICK Plant Derived Products

is a SCIENCE

So many pharmaceutical and other manufacturing firms have for years confidently placed their label over preparations made with Penick botanical products such as:

Aloin U.S.P.	Ephedrine Sulphate U.S.P.
Berberine Bisulphate	Hydrastine (White)
Berberine Hydrochloride	Hydrastine Hydrochloride N.F.
Berberine Sulphate	Hydrastine Sulphate
Chrysarobin	Pilocarpine Hydrochloride N.F.
Colchicine U.S.P.	Pilocarpine Nitrate U.S.P.
Derris Extract	Podophyllin U.S.P.
Emetine Hydrochloride	Pyrefume (Pyrethrum Ext.)
Ephedrine U.S.P.	Rotenone
Ephedrine Hydrochloride U.S.P.	Salicin N.F.
	Scammony Resin N.F.

ALKALOIDS, CONCENTRATES, RESINS, OLEORESINS, SOLID and POWDERED EXTRACTS, in fact all PENICK botanically-derived products are manufactured to meet standards substantially more stringent than those officially prescribed.

Striving constantly to set still higher standards of quality, our staff of experienced Chemists, Pharmacognosists, and other technically trained workers, utilizes the most modern equipment available in plant and laboratory. These men must place their stamp of approval on every lot of PENICK plant-derived products before it is deemed worthy of bearing the PENICK label.

If you are looking for quality and uniformity, quick deliveries, a wide variety of botanicals—at satisfactory prices—*drop a line to* PENICK *for quotations*

IF IT GROWS . . .
ASK PENICK

& COMPANY

1228 W. Kinzie Street, Chicago

THE WORLD'S LARGEST BOTANICAL DRUG HOUSE

Won by Woodbury

SEALS BY ALSECO

Unlike some beauty contest winners, Alseco Seals have a lot more than mere beauty to offer. They offer greater sealing efficiency, too.

The Rolled-On method of application (forming the threads in the seal as it is put on the container) gives a perfect fit of seal to glass; leakage and evaporation are reduced to a minimum.

Every package, whether it comes off the line in the morning, at night, or next month, is sealed exactly the same as all the rest. This uniform security of the seals is unequaled by any other sealing method.

That is a strong claim. We are prepared to back it up with a comparative test right in your own plant, applying R-O's on your product and measuring their sealing efficiency against that of your present closure. If you would like to make such a test, a test to which we tie no strings of obligation, write ALUMINUM SEAL COMPANY, 1323 Third Avenue, New Kensington, Pennsylvania.

TAILOR MADE

Alseco SEALS AND SEALING MACHINES

AT YOUR SERVICE: 25 YEARS OF EXPERIENCE BUILDING QUALITY SEALS AND SEALING MACHINES

SAFE ON BASE?

Play Safe! Choose the base that is always uniform, always odorless, always tasteless, safe against rancidity — and well ahead of U. S. P. requirements.

★SHEROLATUM

THE IMPROVED

PETROLATUM

with benefit of smoother, long sherolatum fibre . . . every ounce Pennsylvania straight run stock, filtered, entirely free of sulphur compounds.

★KREMOL

WHITE OILS

are oils of rare purity with emulsifying qualities that make them the blue-ribbon bases for creams and other cosmetic products.

Checked and double checked in every step of the refining process, KREMOL WHITE OILS and SHEROLATUM possess the constant high qualities on which critical package houses have learned to depend.

Put them to test! You may discover the economical base that gives your product the quality competition demands.

Write today for the whole story on Sherwood quality bases.

NOTE!

to Wholesale Druggists: Try Sherolatum in beautifully lithographed tins. It's a profitable resale item.

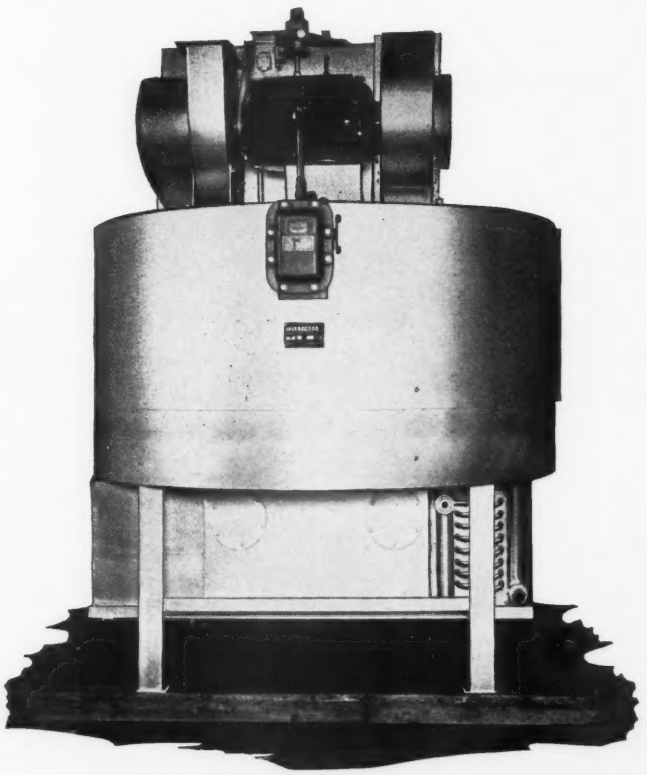
SHERWOOD PETROLEUM COMPANY, INC.

Refiners of American Medicinal and Technical White Mineral Oils, and U. S. P. and Technical Petrolatums

MAIN OFFICE: ENGLEWOOD, NEW JERSEY *BRANCHES THROUGHOUT THE NATION*

HUMID SUMMER WEATHER IS COMING

GET WINTER DRYNESS ON HUMID SUMMER DAYS



INVESTIGATE THE LECTRODRYER NOW

LECTRODRYER equipment is now being used by many of the larger Pharmaceutical and Chemical manufacturers for maintaining low relative humidities in their process rooms.

With LECTRODRYER equipment they can maintain winter dryness all year round, enabling them to carry on coating, tableting, and other processes affected by high humidity without delays, sticking of machinery, or costly shut-downs. Storage and packaging rooms where moisture affected products are handled are also maintained at constant low relative humidities with LECTRODRYER equipment.

We will be glad to send details on how the LECTRODRYER will solve your humidity problem.

PITTSBURGH LECTRODRYER CORPORATION

FOOT OF 32ND ST. PITTSBURGH, PA.

• ESSENTIAL OILS • PERFUME BASES •

AROMATIC CHEMICALS • FLAVORING MATERIALS

TERPENELESS OILS • ETHERS • ETC.

CUIR DE LUXE

This can be used as a top note in modern odors — lotions, eau de colognes, etc. — where a characteristic leathery note is required.

It gives your finished product a very pleasant and distinguished effect.

$8.50 per pound

Ask for samples and directions.

POLAK'S FRUTAL WORKS Inc.

Los Angeles
Chicago

36-14 35th St., Long Island City, N. Y.

San Francisco
St. Louis

CONCENTRONE

A NEW PRINCIPLE in Perfume fixation, completely eliminating the problems of lasting quality in perfume concentrates

A free sample and information upon request

●

Norda

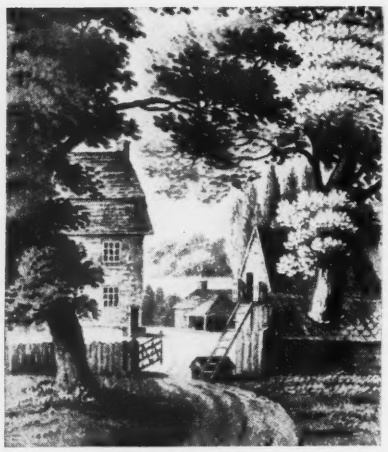
ESSENTIAL OIL AND CHEMICAL COMPANY, INC.

NEW YORK OFFICE
601 WEST 26TH STREET

CHICAGO: 325 W. HURON STREET
ST. PAUL: 253 E. 4TH STREET
LOS ANGELES: 2800 E. 11TH STREET
SOUTH: CANDLER ANNEX BLDG., ATLANTA, GA.
CANADA: 119 ADELAIDE ST., W. TORONTO

VARIETY
Whatever your need, there's a Swindell bottle for it!
For instance, here are six of the large variety of stock bottles offered for your selection. Reading from left to right they are "Grape Wine", "A-195", "S-49", "A-415", "W-55", "275-D".
In addition to the wide choice of stock bottles, private mould designs may be created for your exclusive use. Consult us on your packaging problems; write for our complete catalogue: "Bottles by Swindell".
SWINDELL BROS., Baltimore, Md.
Latin-American Representative
MR. ROBERTO ORTIZ
Havana, Cuba
200 Fifth Ave.
New York
When you think of bottles . . . think of
Swindell

DOW EPSOM SALT U. S. P.



A COW'S REFUSAL TO DRINK LED TO DISCOVERY OF EPSOM SALT

An early view of The Old Wells at Epsom, England, the mineral spring where epsom salt was discovered early in the 17th century. Legend has it that the discovery resulted when a farmer's cattle refused to drink the water. News of its curative values quickly spread.

In Dow Epsom Salt, U.S.P., modern chemistry recreates the therapeutic properties of Epsom's original spring. But, unlike the natural salts in Epsom's water, the quality of Dow's product is subject to the most exacting scientific controls.

Recrystallization and special process refinements developed by Dow research produce Epsom Salt, U.S.P. to standards that exceed even the requirements of the U. S. Pharmacopoeia.

Visit exhibits of The Dow Chemical Co. and its Great Western Electro-Chemical Co. Division at the Golden Gate International Exposition.

The exceptional purity and uniformity of Dow Epsom Salt, U.S.P. have caused manufacturers of drugs and pharmaceuticals to express an outstanding preference for this Dow product.

THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN

Branch Sales Offices: 30 Rockefeller Plaza, New York City; Second and Madison Streets, St. Louis; Field Building, Chicago; 9 Main Street, San Francisco; 4151 Bandini Blvd., Los Angeles.

PRODUCERS OF MORE THAN 300 CHEMICAL PRODUCTS

TRADE DOW MARK REG. U. S. PAT. OFF.

IMPROVED
Better SEALING
Sealing pressure is exerted downward and is equalized around the entire circumference—due to under grip of cap thread and accurate matching with glass thread—no tilting of caps, no binding of threads.
Speedier APPLICATION
Abrupt thread start avoids cross-threading, speeds application—caps spin on easily without wedging—chucks grip straight sides readily.
Easier REMOVAL
Reduced friction, absence of interference, extra flexibility in the cap facilitates removal—good, generous gripping surface for the fingers.
Finer APPEARANCE
A trim, neat, handsome cap—best looking on the market—with straight side-walls, finer knurling, neatly rolled wire edge.
ANCHOR C.T. CAPS

● If you haven't compared Anchor *Improved* C. T. Caps with the usual continuous thread cap you should do so . . . because it's outstanding in a number of important respects . . . in its looks, as well as in the way it functions. We have indicated above the most important of these advantages. The improvements in design and in manufacture represent a great advance in cap construction, an advance which, translated into terms of service, means greater efficiency, better protected packages and consumer good will.

STYLES AVAILABLE—In addition to the standard jar cap shown above, the improved construction of the Anchor C. T. Cap has been incorporated in the following styles: C. T. Bottle Cap; NKCT Cap, without knurling or bead; Shellback Cap, the inner shell carrying the thread construction and the outer shell for appearance; the Two-piece C. T. Cap and the Gasket Lined C. T. Cap, for products requiring vacuum packing, sterilization or processing.

DECORATED CAPS—For greater sales appeal, for improved appearance and for reproducing names, trade-marks, slogans, instructions, recipes, etc., use decorated C. T. Caps. All styles are available, coated in black, white and colors, or lithographed with multi-colored private designs at slight additional cost. ANCHOR CAP & CLOSURE CORPORATION, Long Island City, New York and Toronto, Canada. *Closure Division of Anchor Hocking Glass Corporation.*

ANCHOR HOCKING GLASS CAPS
-an unbeatable combination

Summer Waves...

DURING the summer months, inevitable exposure of the hair to the ravages of sun, water, and wind imposes exacting requirements on the permanent wave.

A major consideration in the creation of a coiffure capable of resisting the combined action of the elements, lies in the quality and strength of the ingredients utilized in the preparation of permanent waving solutions.

The use of Merck Fine Chemicals ensures a uniformly high standard of quality which will contribute materially to an achievement of desired results.

The following dependable Merck Chemicals are available:

★ KERATIN ★

Alkaline Agents	Preservatives
Sodium Sulfite	Salicylic Acid
Potassium Sulfite	Benzoic Acid
Ammonia Water	Butoben (N-Butyl Para Hydroxybenzoate)
Ammonium Carbonate	
Potassium Carbonate	
Sodium Carbonate	
Borax	

• • •

If you have not received a copy of the recent Merck pamphlet covering items of interest to the Cosmetic and Toilet Goods Industry we will gladly mail one to you on request.

MERCK & CO. Inc. *Manufacturing Chemists* RAHWAY, N. J.

NEW YORK • PHILADELPHIA • ST. LOUIS • *In Canada:* Merck & Co. Ltd., Montreal and Toronto

Honeysuckle . . .

is timeless in its appeal. The lingering sweetness of its fragrance is especially popular with modern women during the summer and fall. To meet the demand for this odor which the coming season will bring, Givaudan offers a new line of honeysuckle odors, rivaling the fragrance of the natural flower. There is a type ready for use in extracts, toilet waters, powders, or creams. Let us know which of these products you make and we will submit the right odors.

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DELAWANNA, INC., 80 Fifth Avenue, New York, N.Y.

ANOTHER Givaudan contribution to industry's aromatic requirements is the development of CAMFOSAS, a true odor substitute for natural oil camphor sassafrassy.

Now, with the natural product almost impossible to obtain and the price soaring, is your opportunity to discover the merits

Announcing

CAMFOSAS

True Odor Substitute for Oil Camphor Sassafrassy

of CAMFOSAS, Givaudan's high quality odor substitute.

CAMFOSAS not only closely resembles the odor of the natural product but is remarkably low—and steady—in price. Our staff will be glad to show you how it can be used in your products with profitable and pleasing results.

Write for a sample and further information.

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HAWAIIAN *Garden*

A Bouquet reminiscent of the exotic, lasting odor of the flowers indigenous to these lovely Garden Isles, sweet and intriguing.

The present trend in perfumes is Polynesian.

HAWAIIAN GARDEN won first award of the California Cosmetic Association, not only because of its intrinsic excellence, but also because it distinctly follows the modern trend.

$24.00 per pound . Trial ounce $1.75

FLORASYNTH

THE HAWAIIAN GARDEN
In this perfume we have succeeded in capturing the unforgettable intriguing odors of the Garden Isles.
Among many components we have the following typical Hawaiian Floral Odors.
JASMIN (Star) Decorative vines blooming the year round.
GINGER - Several varities with varied colored flowers.
KUKUI (Candlenut Tree) - Flowers are crowded in large white clusters.
LILY (Water) - Commonly red & blue.
HONEYSUCKLE - Bearing pink & yellow blossoms.
LEHUA - Most po
Hawaiian
ACACIA
ROSES
ARDENIA
Tammy Cherry.

FLORASYNTH LABORATORIES, 1533 OLMSTEAD AVE., N. Y. C.

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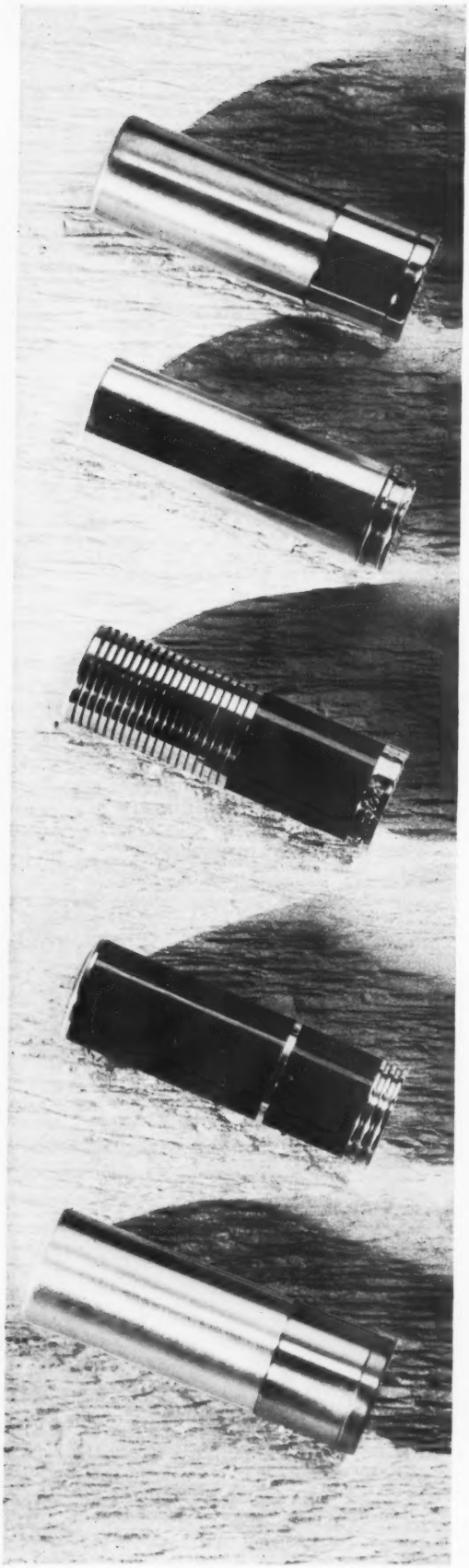

NEW

THE LIPSTICK OF THE FUTURE

"Necessity is the mother of Invention"—This old adage has again been proved by the popular acceptance of Sagamor's new "spiral-less" and "pinless" lipstick. Yes, the cosmetic industry has acknowledged its need for a modern lipstick that offers the following improvements:

1. Elimination of filler wobbling (propels and repels vertically).
2. Facilitates filling (definite stoppage and anchor for filler—with refill cup).
3. Smoother action.
4. Overcomes rattling.
5. When lipstick is applied—pressure will not force it down.
6. Superior outside appearance (jumbo and superjumbo sizes).

Our quotations will be of extreme interest.

Let us show you samples of what we are doing for many nationally known concerns—and offer suggestions in your own color scheme and design. Incidentally, a variety of distinctive bases and caps are available.

(Patents pending)

Sagamor

metal goods corp.

320 fifth avenue, new york

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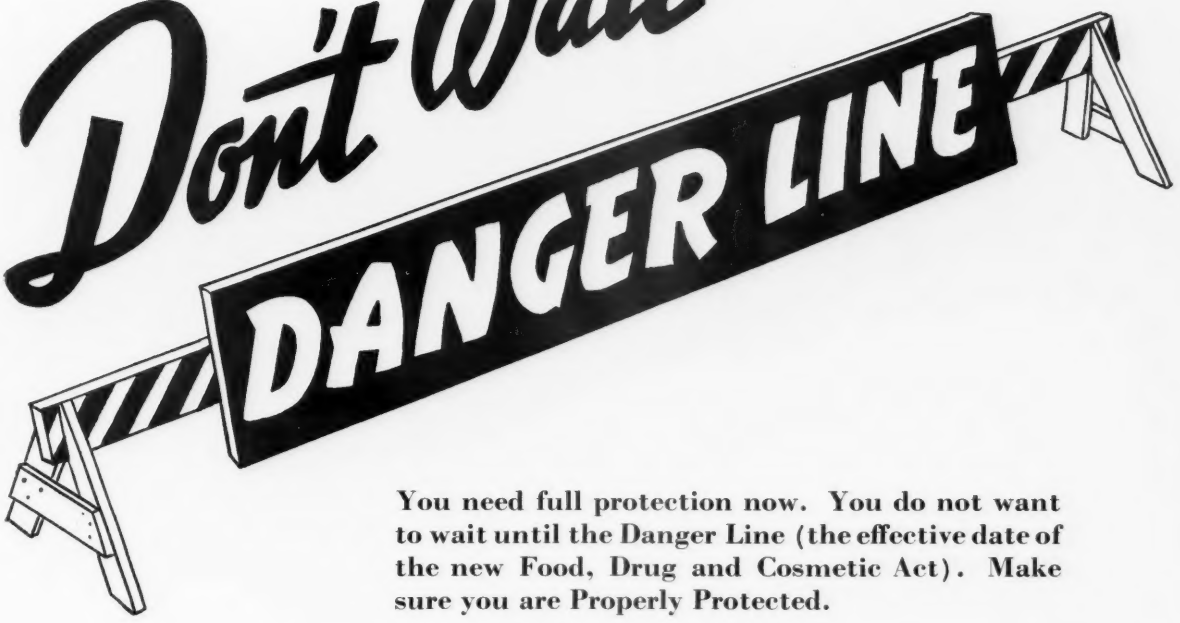
- **COAST OFFICE:** R. G. F. Byington, 155 North Vermont Avenue, Los Angeles, Cal.
- **PLANT:** 40 Washington Avenue, Milltown, N. J.

Don't Wait *till the*



You need full protection now. You do not want to wait until the Danger Line (the effective date of the new Food, Drug and Cosmetic Act). Make sure you are Properly Protected.

Part Protection is no better than the following example taken from a celebrated recent decision between a drug house and a large insurance company.

> "What the Insurance Company gave with one hand it took away with the other. What this Policy does cover has been difficult for us to determine."

Connor clients are protected by a special policy designed to give Full Protection.

We will gladly analyze your present Policy and point out any changes needed. Don't be misled by those who may say your Policy needs no revision. Find out Now.

Or, if you lack Products Liability protection we will analyze your requirements and recommend the specific coverage you should have. This service is yours without cost or obligation.

A. P. CONNOR

DREXEL BLDG. PHILADELPHIA, PA.

National Specialist in Products Liability Insurance for Drug, Cosmetic and Chemical Manufacturers and Wholesalers

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NAIL ENAMEL

Read Carefully!

Few people realize that manufacturing real NAIL ENAMEL is an Art as well as a Technique.

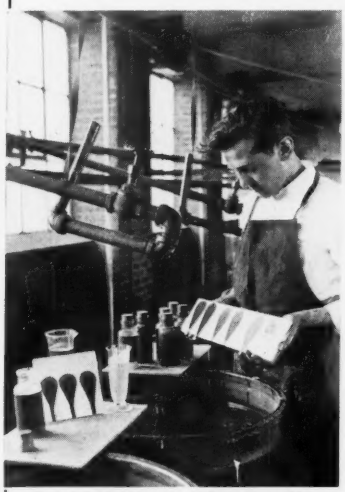
Technique is absolutely necessary, but that alone is not the whole story. We have shown you our laboratory and plant equipment necessary to manufacture, and now we bring to you the artistic view.

Getting the right color and producing a uniform color each time is vitally important. We prove to you that we bring out new shades first, in the latest styles and modes with absolute uniformity. We lead in every new improvement in

NAIL ENAMEL

Then we run a series of tests to prove our Technique and our Art. Can you comprehend a more vital and complete production unit as your source of supply.

NAIL ENAMEL is a line which you cannot artistically, economically or consistently produce yourselves.



Expert Color Matching and Factory Control

Why not let DURLIN do it.

Just a brief illustration of the tests DURLIN goes thru to guarantee you a convincingly

FIRST QUALITY ENAMEL

Devote your time to

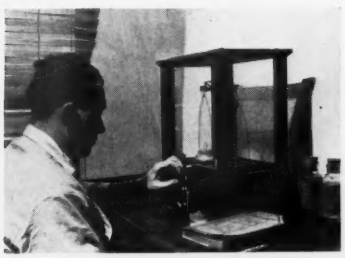
SALES

Let DURLIN do the rest!

Testing on the Nail

At left: Acid and Alkaline Tests

Below: Total Solids Determination



THE DURLIN CORPORATION

The Most Experienced Producers of Nail Enamel

11 WEST 42nd ST. NEW YORK, N. Y.

Poor chap! trying to plow..

YES, but

Many sales and advertising managers are that way, too! They're trying for a consumer demand that will pull the product against the drag of limping dealer interest.

Yet you've seen it happen hundreds of times —how the interest of dealers and salesgirls has put life and vigor into a product and made each promotion dollar do the work of three.

You can secure the interest and cooperation of retailers and salesgirls in the 6000 stores that do 80% of the quality toilet goods business. Because these girls, (14,000 of them) and these buyers, read TOILET REQUISITES with deep personal interest. And they can be influenced by the advertising they see, to believe in your product, to expect and want to anticipate the interest of their customers in your product.

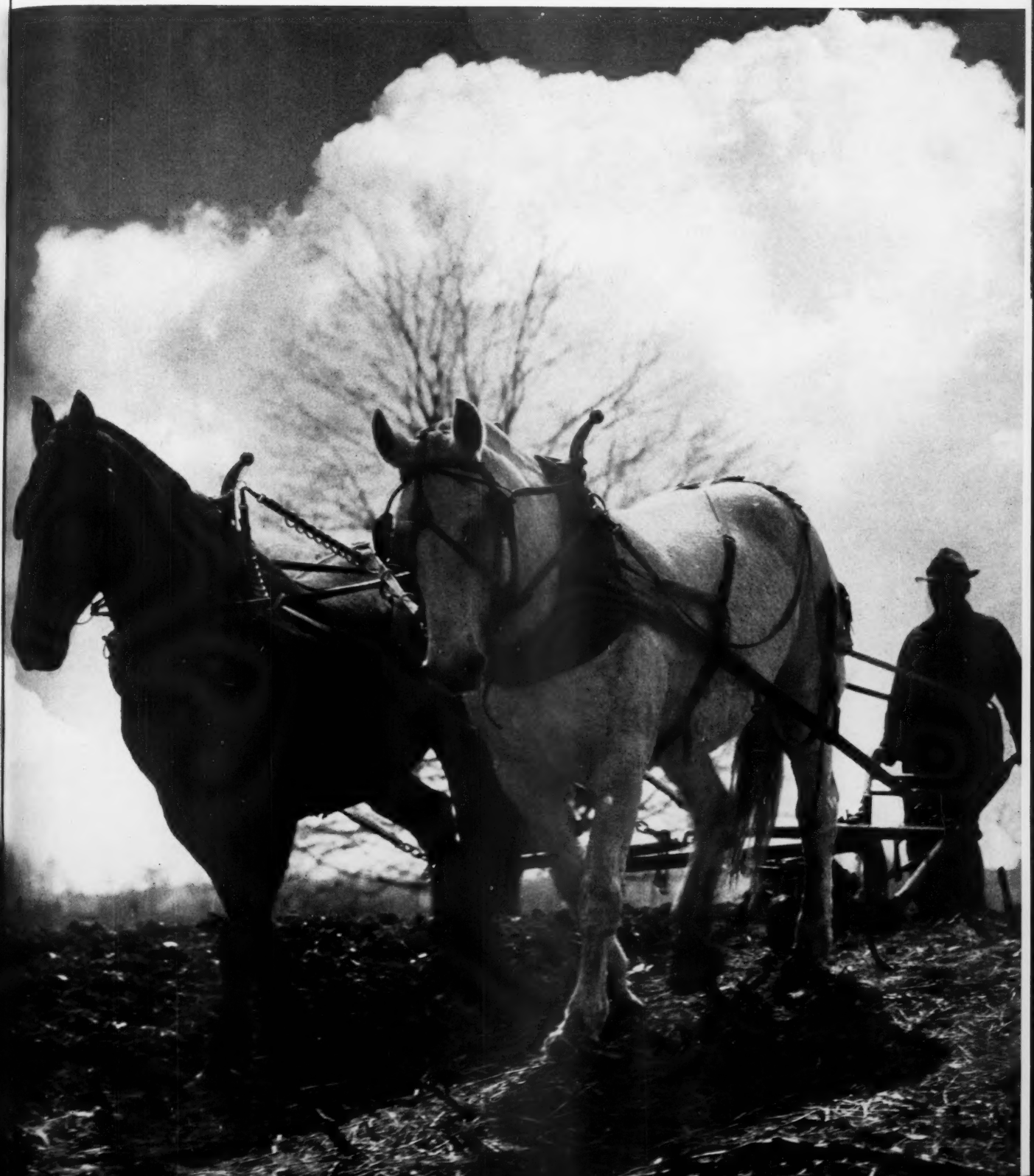
Don't expect your promotion dollars to operate productively with lagging dealer and salesgirl interest. At surprisingly low cost, TOILET REQUISITES will change this limping partner to a vigorous team-mate.

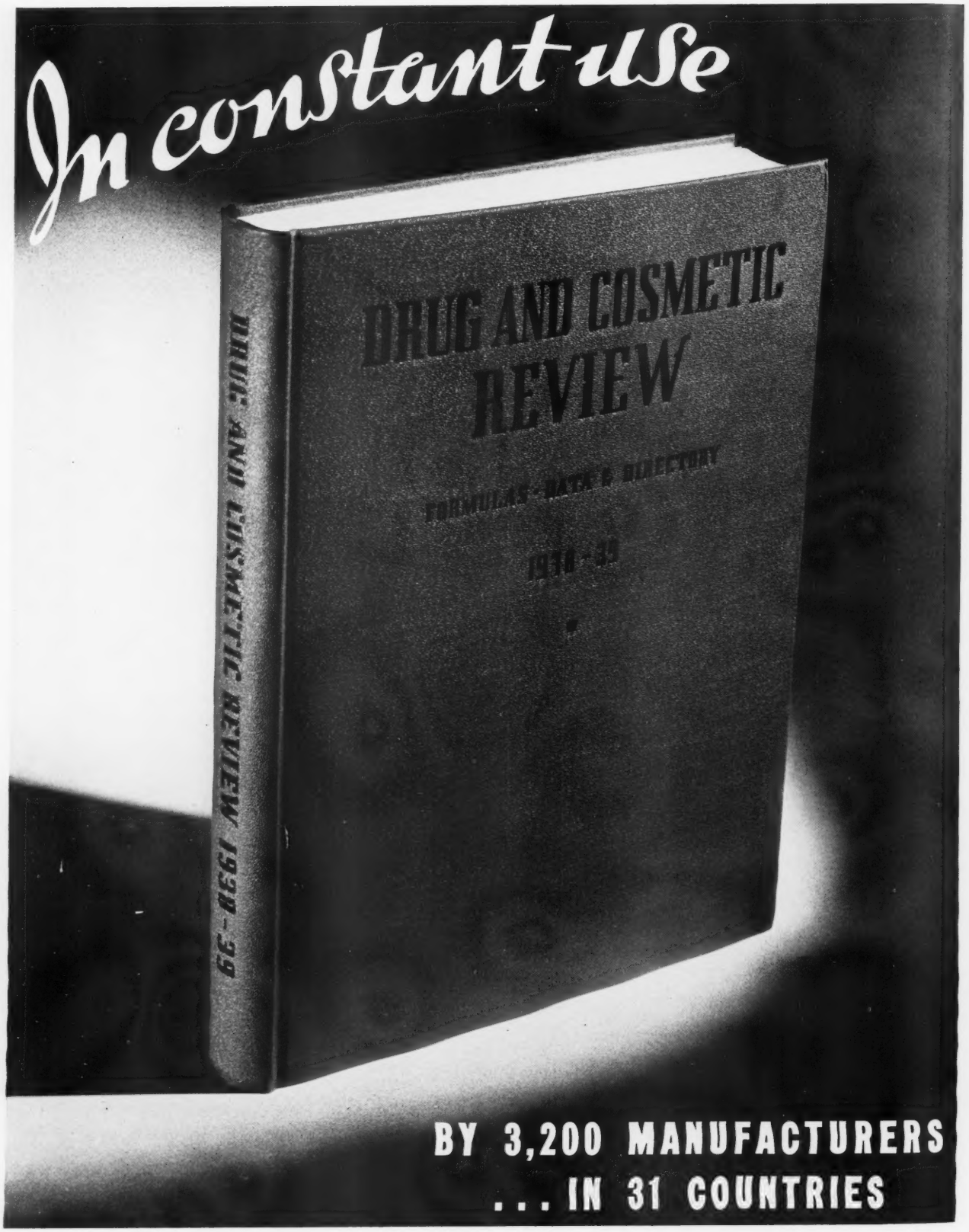
Toilet Requisites

101 WEST 31 STREET NEW YORK

...ow... with one horse LAME

EWING GALLOWAY




In constant use
DRUG AND COSMETIC REVIEW
FORMULAS · DATA & DIRECTORY
1938-39
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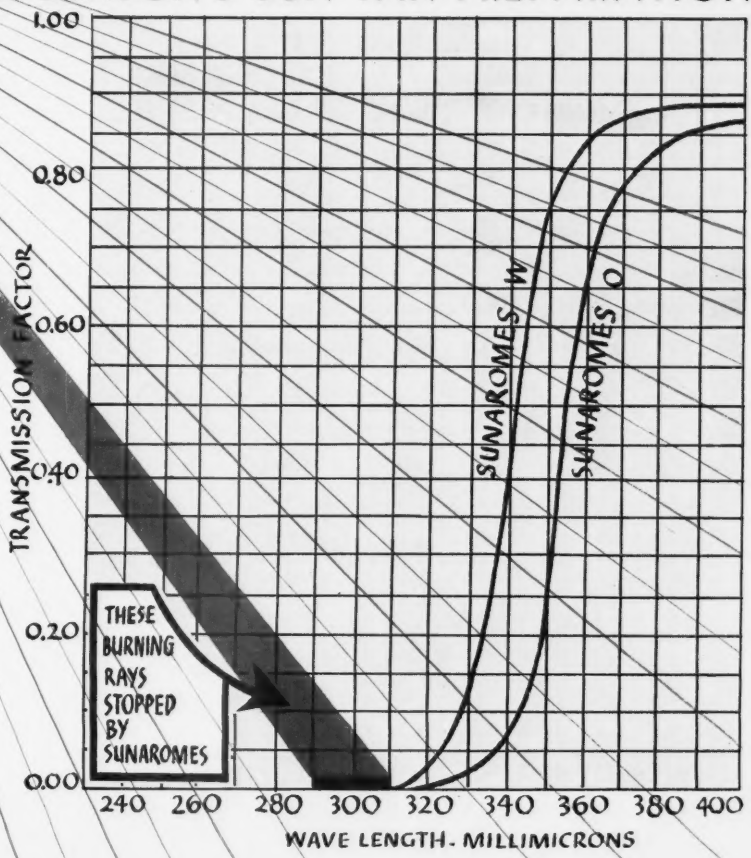
BY 3,200 MANUFACTURERS
. . . IN 31 COUNTRIES

NOT TOO LATE!

FOR THIS SEASON'S SUN TAN PREPARATIONS



SUNAROMES

(Trade Mark Applied for)

PERFUMES THAT SCREEN OUT BURNING RAYS

Proven effective, not only by the spectro-photometer, but also by actual tests under the sun in various latitudes and seasons.

SUNAROMES produce effective, exquisitely scented sun tan preparations in a simpler, modern, more economical way. All that you, the manufacturer, have to do is dilute SUNAROME Perfume with the medium you prefer . . . be it water-gum, water-alcohol, water alone, liquid cream base, mineral oil, fatty oils or mixtures of the above. The perfume compound itself (SUNAROME) acts as an effective screening agent.

REMEMBER! SUNAROMES are scientifically compounded, non-irritating perfumes, definitely not chemicals with unappealing odor. Soluble in water, alcohol or oil, they give positive protection against the sun's burning rays.

Send for Samples and Descriptive Booklet now! Write to Dept. (D)

FELTON Quality

FELTON

CHEMICAL COMPANY, INC.

603 Johnson Ave. Brooklyn, N. Y.

Manufacturers of AROMATIC CHEMICALS, NATURAL DERIVATIVES, PERFUME OILS, ARTIFICIAL FLOWER AND FLAVOR OILS

STOCKS CARRIED IN PRINCIPAL CITIES

Radiates Profits... *Repeatedly!*

HELFRICH *Radiance* Lipstick packs a sales punch that creates extra profits for you. Its super-lustre (regardless of shade) immediately attracts women. Its lasting glow and silken smoothness holds them — keeps them coming back for more.

Radiance Lipstick is non-greasy, non-toxic, and does not dull or "sweat" with age or exposure. Like all HELFRICH exclusively private brand cosmetics, *Radiance* Lipstick is manufactured in conformance with the existing regulations of the Federal Food, Drug, and Cosmetics Act. Write or wire *today* for samples.

We make private brands exclusively. We do not compete with those we serve.

The Helfrich Line of Radiance Cosmetics includes: *ROUGE COMPACTS • CREME ROUGE EYE SHADOW • POWDER COMPACTS • FACE POWDER • COSMETIQUE*

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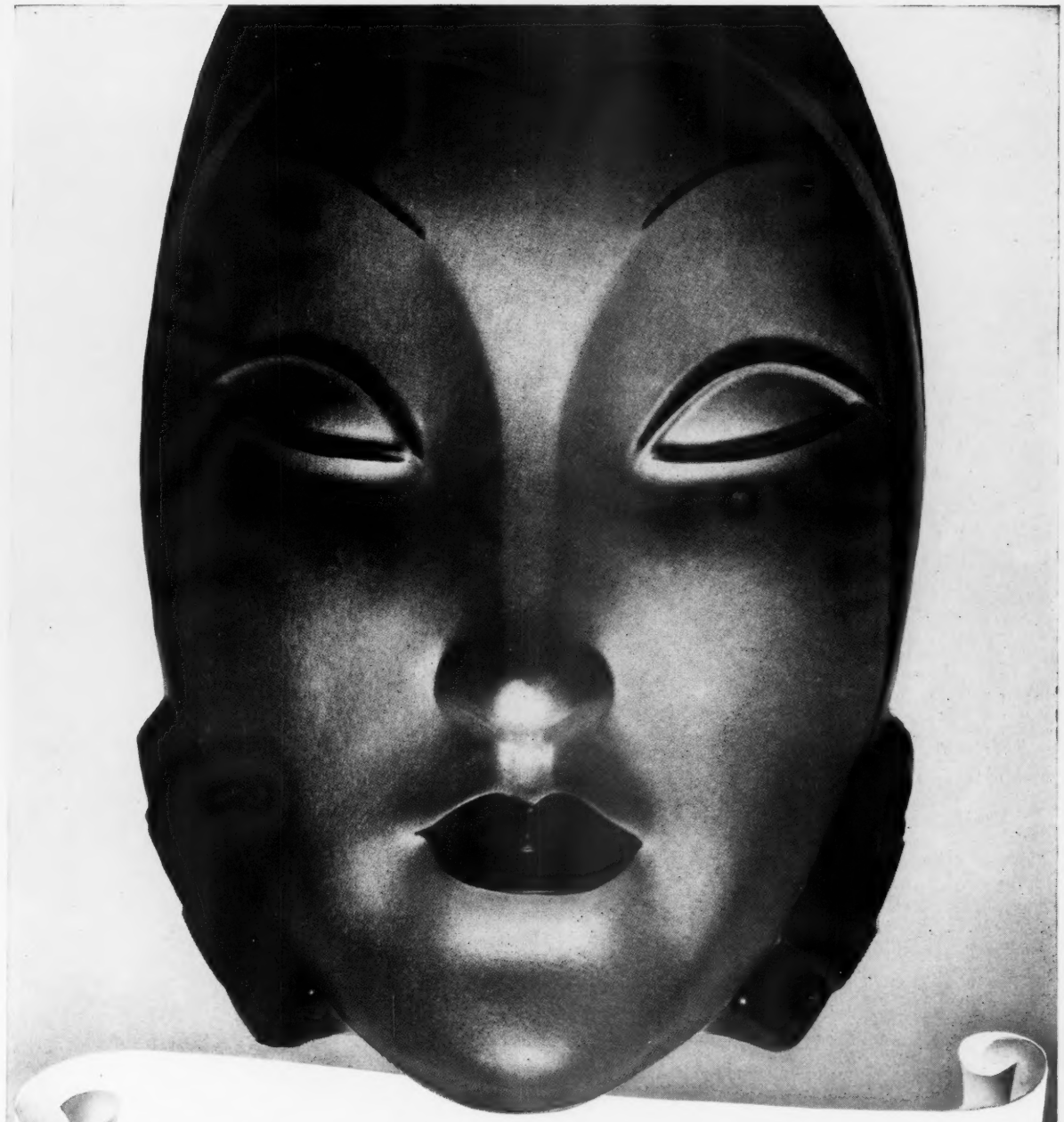

MALLINCKRODT CHEMICALS

for COSMETIC MANUFACTURE

Aluminum Chloride: Unusual purity for minimum irritation.

Potassium Sulfite: A product of excellent quality and uniformly high assay.

Aluminum Sulfocarbolate: The new deodorant chemical.

Magnesium Stearate: Impalpable fineness and smoothness.

Zinc Stearate: Fine, white, bulky. Uniformly pure and gritless.

Accent on CALCIUM MANDELATE

Mallinckrodt Calcium Mandelate presents the pharmaceutical manufacturer with a practically tasteless, odorless, neutral white powder. Available in two forms—a light fluffy powder for use in powders and granules, and a dense powder for use in tablets. Excellent, too, in contributing to the quality of pharmaceutical products are uniform Mallinckrodt Acid Mandelic, N. N. R., and Sodium Mandelate.

INFORMATION AND QUOTATIONS GLADLY FURNISHED

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WHY DELAY?

WHETHER this industry likes it or not, the Federal Food, Drug, and Cosmetic Act is going into effect some time within the near future. And no matter when it goes into effect, there are going to be many products that are not in compliance with it in the opinion of the enforcement officials. A law of this kind cannot be made one hundred per cent. effective overnight, and enforcement officials are doubtless quite well aware of this fact. Tolerance on the part of those who are trying to comply with the law was to be expected, and was assured by statements made by Enforcement Chief Campbell and his superior, Secretary of Agriculture Wallace.

THEN why all the shooting about postponement when the effective date draws near? Why incur the enmity of the enforcement officials who are opposed to any extension and who have promised tolerance if no extension is granted. The industry must remember that no promise of tolerance has been made with an extension although the industry had better pray for such tolerance because they will need it no matter when the law takes effect.

THIS business of delay on the part of the industry is something that cannot too strongly be condemned. Trying to gain a few months or save a few dollars in a matter that involves the entire business life of the manufacturers in this industry is something in which we cannot see any sound reasoning. It strikes us that the sensible thing to do would be to get on the basis under which business is to be done in the future as quickly as possible and thereby gain ground instead of losing it.

THE new law is on the statute books of the country and this industry is going to operate under it for as long as any one can see in the future. The old order of doing business in this industry is going to pass out very soon. We wonder why manufacturers do not try to find out as soon as they can just what they are going to be up against under the new order.

CONSIDERING THE DRUG ACT

DIFFICULT as it is for the small maker of cosmetics to know exactly what to do in trying to label their products so that they will be in conformity with the new Food, Drug and Cosmetic Act, we believe that these manufacturers as well as other manufacturers will have a load off their minds and will be better able to conduct their businesses if they will look the facts in the face. We are of the firm opinion that manufacturers should look at the law with a full realization of its intent, and then go just as far as they can in doing what they think the law and the regulations require them to do. There is no sense in trying to hold back and do less than one thinks is expected. Such a procedure only leads to trouble.

The main idea of a large number of manufacturers is to hold back and see what their competitors are going to do. There is really no need for this. For under no circumstances should any manufacturers order heavily on new labels or new containers due to the fact that during the period of adjustment, further changes are very likely to be necessary. Because a competitor does one thing and another manufacturer copies him does not mean that either of them are right. It is true that most of the large manufacturers have engaged the best consultants obtainable, but even these consultants cannot be certain that everything they do is going to be in accordance with the opinions of the enforcement officials. As a matter of plain fact, the enforcement officials themselves do not know how far they will go in requiring changes in labels which they might now think are satisfactory.

Enforcement of the old law was a constant development over the entire thirty-two years it was in effect. Conditions surrounding products and their labeling during the ten years of the old law were entirely different in innumerable respects than they were during the first twenty years of the law. The development of tolerances for pharmaceutical products, the attacks upon names and claims of products, and many other works by the FDA became intensified during the last years of the old law. The number of seizures for misbranding during the last year of the old law was in the thousands—proving that the limit of that law had not been reached.

The question of what is a drug and what is a cosmetic is one of the most troublesome points to the cosmetic manufacturers. However, there is a comparatively simple way of deciding this question in most instances, although a few cases are still hard to solve. The product becomes a drug when claims are made that affect a function of the body, or that tend to prevent, mitigate, or cure a disease,—a disease being a condition that needs medical treatment to relieve discomfort.

Applying this method we see when a deodorant claims to stop perspiration and thereby claims to affect a body function, it becomes a drug. If a deodorant only claims to remove odor, it is not claiming to affect a body function and thereby can be classified as a cosmetic. An astringent is necessarily a drug since it affects a body function by closing pores or drawing the skin in a way that would not occur naturally. A sunburn product is a drug if it tends to prevent the disease, sunburn which requires medical treatment for relief.

One can run through the whole list of products which were formerly considered cosmetics, and with thinking the product and its functions through, can tell quite closely whether or not it is likely to be considered a drug or a cosmetic. If a product bears claims that put it in a drug classification, then it should bear the names of the ingredients which are the basis of making these claims. Other ingredients do not have to be named.

The word "tonic" is doubtless taboo if a product is to be classified as a cosmetic. The word "tonic" implies a medicinal or remedial effect which is not part of a product that is strictly a cosmetic. Hair tonics must drop the word tonic unless the manufacturers of them are prepared to back up this word with proof of remedial effect. A large number of hair preparations on the market will doubtless become cosmetics without any remedial claims. Those hair preparations that do eliminate dandruff or stimulate the scalp, can make

these claims if they follow the drug classification requirements under the act and the regulations.

Another difference between the labeling of a drug or a cosmetic is that all products classified as drugs must carry on the label the name and percentage of any kind of alcohol contained in the product while cosmetics do not have to make any alcohol declaration. The law calls for both percentage and quantity of alcohol, but the regulations state that the percentage alone will be considered an adequate declaration. Ethyl alcohol or any of the specially denatured ethyl alcohols can be declared simply by using the word "alcohol." However isopropyl alcohol or any of the other alcohols must be given by the full name.

There is no reason why the smaller manufacturers who want to do so, could not use stickers to be applied to the present labels—these stickers containing the additional information required under the new law. Many of the small cosmetic manufacturers are following this procedure as a means of saving expense. All that is necessary is that these stickers be firmly applied so that they will not come loose. The stickers can be used for giving additional information or for covering up names or statements that would not conform under the new law.

There is every indication that the FDA is going to be reasonable and tolerant in getting enforcement of the new law under way. Tolerance and reasonableness on the part of the FDA must, however, depend upon the extent to which the individual manufacturers have applied themselves in trying to do what is right under the act in their opinions. For this reason we have advised manufacturers who are making changes to keep some of their old labels and be prepared to present them to the department as an example of what they have done if the department ever calls them to task. The enforcement officials of the FDA have never, to our knowledge, born down heavily upon any manufacturer who was trying to comply with the law to the best of his ability. We do not see any reason why there should be any change in the attitude of the department in this respect although many might begin to believe so as time goes on. The fact of the matter is that this bill gives the department so much additional power, and the department is charged with a strict enforcement of this new law, that their increased activity is going to appear rather harsh for a long time to come.

The FDA is clearly on the spot in the enforcement of this new act. So widespread publicity has been given to the new law ever since it was first proposed almost six years ago, that the public will to a large extent be watching its enforcement. Congress has heard so much about the law that they will be watching for real changes also. In addition the FDA must watch the FTC which body has been so active in enforcing the advertising provisions of the Wheeler-Lea Act against the products of this industry. For these reasons the industry can expect a real thorough-going enforcement of the new act. With additional enforcement appropriation provided for in the deficiency bill, the FDA will probably move very swiftly to enforce this bill as broadly as possible. The industry will hear too much about the enforcement of the act for a long time to come.

But we do not believe that the industry has anything to worry about if the manufacturers will watch the wishes of the FDA as they are expressed by the enforcement officials as time passes. Every manufacturer —large or small—is going to be in the same boat. The FDA does not make exceptions, and once it makes up its mind as to claims for a certain type of product it checks up on every individual product of the particular type and acts accordingly no matter by whom the product is made.

For many years under the old law the FDA has enforced the law by the method of taking one type of product at a time and getting all items of the one class in conformity with the law. Doubtless, when enforcement of the new law gets under way this method will be used for the reason that it is an orderly method and a great deal can be accomplished through its use. For this reason, manufacturers of certain types of products might not hear from the FDA for a comparatively long time. Or a manufacturer might hear from the FDA on one of his products and not on the others. This does not mean that he will not later hear from them on the other products, but merely mean that the FDA has not had time to get to any of the other products.

As cosmetic manufacturers get working with the FDA they will quickly find out that working under them is not too terrible. They will, however, be disturbed on occasions by the FDA deciding that changes are necessary on products to which no attention has been paid for many years. Many drug manufacturers could never understand why the FDA should consider a product misbranded after it has remained on the market for a long term of years undisturbed by the FDA. This is no answer to them, however. Times and conditions change and additional knowledge comes to light so that products which were once considered all right are not all right any longer. Under these conditions the FDA must take action.

It is for this reason, and also because the FDA cannot pose as being in possession of all the knowledge surrounding all the products which might be marketed in this industry, that the FDA will not formally approve labels submitted. They will talk the matter over with a manufacturer and will tell him that he can use the label which they examined, but that is no guarantee that at some later date they will not disapprove of the same label. This state of affairs is necessary due to the state of flux of conditions surrounding the products of this industry.

Above is shown a twelve year old Beduine carrying a load of Rosemary. At the right is shown the primitive and economical way of transporting Rosemary on the back of a mule.

TUNISIAN ROSEMARY

By L. TRABAUD*

Oil of rosemary, so widely used in perfumery and soap, has been eagerly sought after since the start of the Spanish revolution. It was Spain which, up until the time when it was torn by civil war, supplied the soap makers of the entire world with oil of rosemary. The consumption of this oil is considerable as is shown by the fact that England alone uses more than 50 tons a year.

Because of the lack of Spanish oil, it has become increasingly necessary to call upon the other producers who are principally in the south of France, Tunisia and Dalmatia. The production of French rosemary oil has become, in recent times, relatively important but, because of its high price, its use is limited to Eau de Cologne and toilet waters and to the highest quality of toilet soaps.

Dalmatia also produces an oil of very fine quality, better than that from Spain, but inferior to that which comes from the south of France and Tunisia. Rosemary oil produced in Dalmatia is absorbed to a large extent by the countries of Central Europe and by America.

Actually, rosemary is found in all the countries bordering the Mediterranean and along the shores of the Adriatic. One can find it also in the Balearic Islands, Corsica, Greece and Turkey. In northern Africa it is found in Algeria and is especially common in Tunisia.

Tunisia—which the Roman senators called "Africa"—is rich in plants which grow wild but they are exploited only imperfectly and the aromatic plant industry is not very well developed in this French protectorate. Nevertheless, the climate and nature of the soil in Tunisia which made it the "granary of Rome," suit it admirably to the culture of perfume plants.

*Technical Director, Bruno Court.

Natural growths of rosemary are particularly abundant in the vast stretches of South Tunisia where the arid lands are covered almost exclusively by this perennial plant. Thousands of acres are covered with bushes crowded together and growing in a soil that is essentially calcareous. In the spring the bushes are a very dark green, studded with a thousand little white corollas of which the bees are very fond. In those plains rosemary is found growing side by side with thyme, especially *ciliatus* and *lavandula multifida* which grow so plentifully in North Africa.

In Tunisia the settlers have for many years used rosemary as fuel for lime kilns.

The Arabs have always loved rosemary and its oil was known to all the oriental chemists of the Middle Ages. There are two varieties, each quite distinct, which the Arabs designate as "Kelil," or false rosemary, and "Kelil Safi" or genuine rosemary. They use the latter in liver ailments. It is principally rosemary or *Rosmarinus Officinalis* which is distilled.

The *Rosmarinus* species belongs to the family of labiated plants and has only one linear variety, *Rosmarinus Officinalis L.* but this species embraces numerous forms and distinct varieties.

On the open plains, it grows in clumps 1½ foot in height and 7 feet or more in diameter, which are sometimes very dense. In the underbrush the vegetation is thinner and the clusters can develop to a height of 4 to 7 feet. Its shaft is strengthened by numerous branches covered with lineal leaves, one inch long, dark green in color with raised edges, smooth on top and whitish on the under side. The flowers, generally a pale purplish blue, are at the ends of the branches. All parts of the plant are fragrant but the odoriferous cells are usually localized at the edges of the leaves. The varieties with white flowers, the *flexuosus* and *laxiflorus* are common. It is an evergreen plant of which the morphological structure varies according to the soil and the climate in

At the left and below are two views of Rosemary stills in the Roman ruins of Zeguidane, Tunisia.

which it grows. The distillation takes place, as in Spain and Dalmatia, nearly all the year round, but especially in May and June. In July, during the harvest which lasts about twenty days, there is often a shortage of native workmen and the harvest is slowed up or stopped temporarily. Then the harvest period is extended until September.

Distilleries are usually set up in the open air and native workmen in burnooses, each with a large fork busy themselves about the stills. The distillation is done either over an open fire or by steam. Distillation over an open fire is the process used by the small producers and, although this is a more economical method, it furnishes an essential oil inferior to that produced by the steam distilleries.

The yield of oil varies according to the time of distillation and runs from 300 to 500 grams of oil for 100 kilos of plant material. The best yields are obtained in March and April.

In the table which follows are given the analytical constants bearing on rosemary oil distilled according to the dates of its harvest. This analysis was made by L. Fatter, a distiller at Carthage who has been good enough to give it to me.

Dates of Distillation	*Sol. in 85% Alcohol*	*Density at 15°*	*Rotation*	*Refractive Index*	*Ester Index*	*Esters as Bornyl Acetate*	*Total Alcohol* $C_{10}H_{18}O$
Feb. 18, '38	Completely sol.	0.907	+3.30	1.4695	2.8	1.0	11.0
Mar. 25, '38	1 vol.	0.912	+2.50	1.470	8.4	2.9	12.0
Apr. 13, '38	1.2 vol.	0.917	+3	1.472	11.2	3.9	
Apr. 29, '38	1.2 vol.	0.918	+4.30	1.471	11.2	3.9	
May 17, '38	1.2 vol.	0.918	+5.20	1.4715	9.8	3.4	
May 30, '38	1.2 vol.	0.917	+4	1.4705	11.2	3.9	
June 12, '38	1.2 vol.	0.918	+4.10	1.4695	9.8	3.4	
June 29, '38	1.2 vol.	0.918	+3.30	1.4695	4.2	1.5	

Mr. Fatter's centers of distillation are about 100 miles from Tunisia and include 18 posts representing 36 stills. About ten of these posts are equipped with steam apparatus and the others use the open fire method. The annual production of this installation is about 25 to 30 long tons of rosemary oil.

We have had occasion to examine two samples of Tunisian rosemary oil, one having been distilled at the height of the flowering season, that is in February, and

At the right are shown Arab workmen at the Rosemary stills in Tunisia. Below is a close-up of the Rosemary stills with a large lot of Rosemary in the background.

the other when the plants were dry, that is in July. It will be seen that the time of the harvest as well as the state of the plants at the moment of distillation have little effect on the physico-chemical character of the oils.

	Oil distilled in February Full flowers	*Oil distilled in July Dry plants*
Density at 15°	0.9156	0.9136
Rotation	+3° 04′	+2° 48′
Refraction at 20°	1.4683	1.4681
Acid Index	0.3	0.3
Ester Index	1.87	1.87
Ester Percentage	0.65	0.65
Saponification after acetylation, total alcohol $C_{10}H_{18}O$	12.4	11.65
Solubility in 85% alcohol	0.8 vol. and more	0.7 vol. and more
Solubility in 80% alcohol	1.6 vols. then slight trouble	1.3 vols. then slight trouble

The oil from the summer harvest corresponds more closely to the standard of the British Pharmacopoeia while that from the spring harvest (March) answers the U. S. P.

The quality of Tunisian rosemary oil is superior to that from Dalmatia and is also superior to the Spanish oil. Its terpene content rarely reaches 50 per cent. while the Dalmatian oils contain 60 per cent. or even more. From the point of view of odor, the Tunisian rosemary oil is the one which most nearly approaches the oils distilled in the south of France. Its odor is less camphorous than that of the Dalmatian oil.

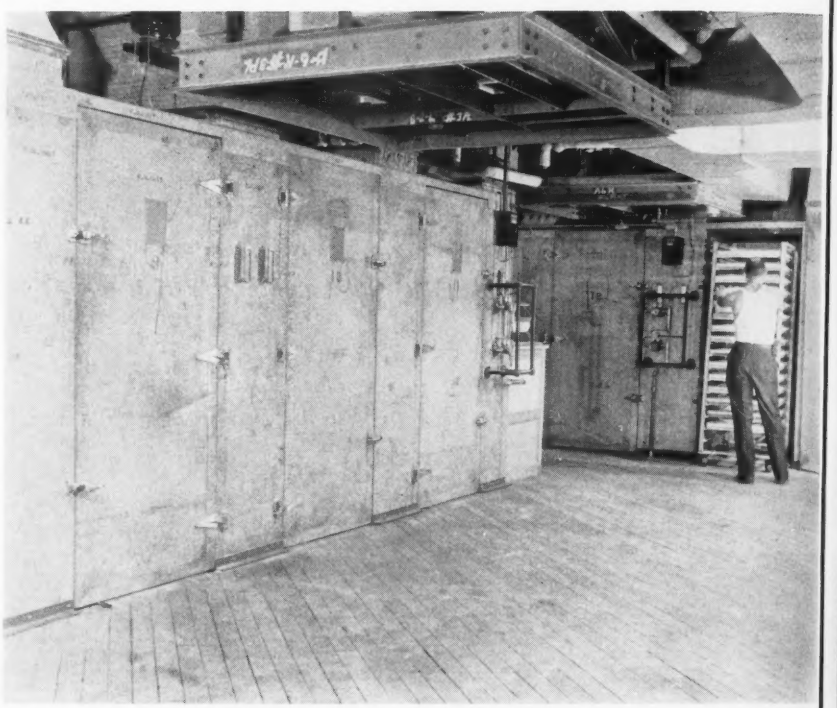
The purchaser should, nevertheless, proceed with caution when purchasing Tunisian rosemary oil for certain distillers are not too scrupulous and do not hesitate to produce oils prepared by mixing true rosemary oil with all sorts of other plants, particularly with mastic.

Tunisian rosemary oil, despite the increase in the cost of transportation and the customs duties, is priced relatively low, especially if one compares it with the French oil. The production in large stills and the cheap transportation charges by donkeys and dromedaries, makes it possible to obtain an exceptionally low price.

Oil of rosemary is the best substitute for oil of spike, principally in the manufacture of soap where its value is most appreciated. The perfumer has used it for a long time in various cosmetic preparations, especially in Eau de Cologne and toilet waters. In therapeutics, its stimulating properties are put to use in stomachics for internal use and in a great many liniments for external use.

GRANULATING METHODS

By FRANCIS CHILSON
Industrial Consultant



THE art of making tablets is one of the most involved pharmaceutical procedures. It is an "art" because comparatively little scientific study has been given to this subject. For the most part it is a hit and miss procedure and when one looks at the dust in most tablet plants, it is mostly a "miss" procedure.

In making a tablet, two basic operations are of fundamental importance; mixing the ingredients and compressing the tablet into its final shape. Every other operation connected with the manufacture of an uncoated tablet is subsidiary to these two.

It is essential first of all to secure perfect mixture of the various ingredients of the tablet. This is not always as simple as it seems for the reason that tablets may be made of dry, non-free-flowing powders, crystalline substances, aqueous or alcoholic tinctures, resinous materials, or all of these together.

The mixing problem is complicated to some additional extent also because of the disproportion between the quantities of some ingredients and the basic constituents. Tablets containing narcotics, poison and colors contain a relatively small proportion of active ingredients or color as against the basic material. It is customary, therefore, to triturate the small percentage ingredients with part of the base so as to secure better dispersion. This ancient pharmaceutical procedure was dictated because of the lack of effective mixing and milling equipment.

There is an evident need for a combination mixing mill into which ingredients can be dumped and thoroughly milled. A number of firms do use pulverizers as part of their setup, notably Grove Laboratories in which a pulverizer is an integral part of an almost continuous process. The Grove formula, incidentally, is typical of the entire tablet making art, since it consists of non-free-flowing powders, crystalline quinine, powdered drug extracts, oleo, resins, and tinctures. A small hammer mill with a mixing hopper has been developed, but the trouble with hammer mills generally is that they cannot be cleaned fast enough for the small batch work which is characteristic of tablet making. Work is now being done on a mixing pulverizer so designed that the agitator and the milling rotor can be removed completely in a few seconds and washed.

In order to prepare a tablet mass properly the constituents should be sifted first to remove foreign matter of one kind or another. Secondly, the ingredients should be mixed thoroughly. Thirdly, if the ingredients contain crystals which do not break up easily, or lumpy materials which do not disperse easily, the mixed powder should be milled. A number of firms have for

On the opposite page is shown a battery of Ross dryers in the plant of Sharp & Dohme, Philadelphia. At the right is shown a view of the granulating department of the Norwich Pharmacal Company showing various types of mixers and dust exhaust hooks. Below is shown a battery of Ross truck dryers—note controls.

years used ball mills. Such devices turn out a perfectly homogeneous product but the difficulty of washing a ball mill and its milling stones or balls is obvious. Besides such equipment is noisy, slow to discharge, and dusty. In the absence of some form of milling equipment, many manufacturers follow the practice of drying crystalline substances to remove the water of crystallization so that the crystals will pulverize easily during normal mixing treatment. Complicating the mixing difficulty is the fact that certain tablet ingredients, salol for example, fuse at low temperatures and will stick to the sides of any usual type of mill unless it is water jacketed to absorb the heat generated in the milling process.

Perhaps the most commonly used type of tablet mixer is the tilting double sigma arm mass mixer. This is a lightly constructed type of mass mixer and is used to mix the basic ingredients prior to granulation. The double is better than the single arm type for the reason that it provides quicker and more thorough mixing. Such mixers should be lined with stainless steel or stainless clad steel and the mixing arms should be made of solid stainless steel. It is essential also to see that the design of the equipment provides for exterior bearings. Old-fashioned mixers of this type having bearings of the ordinary kind give a great deal of trouble especially in preparing white granulation because carbonized grease from the bearings seeps into the mixing trough.

One nice thing about a mixer of this type is that through the use of a portable granulator a setup can be made which enables one to make granulation very rapidly. In such a setup the mixer is tilted slightly forward so that the operator can reach into it with a scoop with the utmost ease. Beside the mixer at 90° the granulator is placed, and beside the granulator and parallel with the mixer the drying rack is placed. By standing in the middle of the three units of equipment, the operator can scoop the material out of the mixer into the granulator; he can spread the granulated material on the trays and place these trays on the drying rack without moving out of his position.

Another type of equipment commonly encountered in tablet rooms, though God knows why, is the pony mixer. This machine is essentially a

paste mixer. It was introduced into tablet making apparently for the reason that the can could be toted around from one unit of equipment to another. But pony mixers when used for mixing dry ingredients are not good mixers because they stratify and in any case are not designed for this operation. Secondly, they are very dusty. Thirdly, when the wetted mass is being transferred to the granulator, the operator is required to bend over a considerable distance to lift each scoopful.

In mixing very simple formulas containing free-flowing ingredients tumbling barrels have been employed. While these are convenient and easy to clean, they are, since they contain no means by which mechanical attrition can be secured, useless for the average run of tablet mixing. Spiral type powder mixers with heavy agitators have been used in making tablet masses. These provide very efficient mixing but are less easy to clean than mass mixers. A development of this type of device has been used in the baking trade and it offers some interesting possibilities, since through its use, it is possible to make a transfer of the mixed and wetted material directly to the granulator. This machine has been used to a very wide extent in the milling industries, primarily as a preliminary mixer and sifter. It is so designed that its entire body can be raised on a telescopic shaft either by means of a hand operated screw or hydraulically. This means that the body can be raised high enough to feed the mass directly into the granulator, a feature which would leave the operator free to handle the trays and probably would speed up the process. Probably the most interesting new development consists in a combination mixing and granulating device which is now under test and which to the writer looks like the answer to many problems in connection with tablet mixing.

In brief the first process in making a tablet mass consists in removing foreign matter from the raw materials by means of sifting and then by means of mixing or milling or both making a homogeneous mass. It does not make any difference what kind of equipment is used for this purpose so long as it is fast, easy to clean, dustless in operation, and quiet.

The next step in the preparation of the tablet mass consists in putting the mixed powder into a granular form so that it will run easily on tablet presses. This is an operation which should be superfluous. But no one has yet devised a tablet press or a method of tablet making which will produce firm uniform tablets directly from fine powder. In the meantime we must continue to granulate. There are several ways of converting dry powders into reasonably uniform granulations. We must learn at the outset that when powders have been moistened with water, alcohol, mucilage of acacia, gelatin, starch paste or any of the other binders used for granulating purposes that the mass must have a fracture. In other words, when a handful is squeezed together, it must break easily and not stick. If the material is too sticky it cannot be forced through a granulator equipped with a fine screen. The best that can be done is to work it through a half inch mesh screen and break it up into lumps to facilitate drying. Sticky materials of this character are handled in this fashion. They are coarsely broken up into lumps and when dried the lumps are forced through a granulator fitted with a screen of the required mesh.

In dealing with sticky masses, some firms go to the extreme of making a semi-fluid paste of the ingredients through the addition of an excessive quantity of water. This semi-fluid paste is run out on solid trays and after drying it is granulated to size by means of grinding. In order to make the grinding easy and the granulation soft it is sometimes the practice to run materials of this character into a vacuum dryer so that the dried mass will be spongy instead of solid like hard candy.

By far the commonest granulating method is to dampen the mixed dry materials with a granulating solution made of some form of paste or mucilage in sufficient quantities to make the mass sensibly damp and still not cause it to get sticky. It is one of the tricks in the art of making tablets to know how to add a sufficient amount of moisture to dampen the mass properly without making it too sticky. Some materials like carbon for example will switch from a slightly damp mass over to a sticky dough when only a small additional amount of granulating solution is added.

When the tablet mass has been properly moistened it is fed through a granulator. There are several schools of thought as to how this should be done. If a fourteen mesh granulation is wanted, many firms granulate the dampened mass through a No. 4 mesh screen, on the theory that a sufficient amount of the granulation will disintegrate during drying and handling to give a product which is in the main fourteen mesh or finer. The usual practice is to run the dried granulation through a sifter to remove everything that is coarser than the required mesh. The coarse material must then be ground and added to the rest of the batch.

In connection with the addition of starch which is added to virtually all tablet masses to assist in disintegration several practices are followed. Some firms add most of the starch to the active ingredients at the time the process begins. Others add all the starch after the active constituents have been granulated and dried. Still other firms add part of the starch directly to the basic constituents and the remainder in the form of starch paste. But almost everyone uses a quantity of starch with the lubricating materials on the theory that a few grains of free starch compressed among the granules of tablet mix will swell up and break the tablet quicker than would be the case if all the starch were incorporated in the mass at the beginning of the process.

Another method of granulating which is followed in a few cases is to spread the moistened constituents on trays and dry granulate afterwards. This procedure results in an excessive amount of fines in the finished granulation and it causes an immense amount of dust in the operation of a granulating department. Moreover,

in the operation of the tablet presses, capping or sticking or both are likely to ensue because of the presence of an excessive amount of fines in the granulation.

There is still another method of granulating tablet masses. This is known as slugging. The method consists in mixing the dry ingredients and running them through a heavy duty tablet press. This press forms large slugs which can be ground into granulation of the proper size. The method is indicated in dealing with heat and moisture sensitive formulas. A number of people have tried slugging with ordinary tablet making equipment and have not been particularly satisfied because of the amount of tailings left over which have to be reworked. Unless the formula is sensitive to moisture, the writer believes it is a good practice to add a little sugar syrup to the dry ingredients while they are being mixed. It is not necessary to add a sufficient amount of syrup to make the mass sensibly damp, as this would necessitate drying the finished granules. The presence of a slight amount of sugar syrup will make the slugs form pretty well and will minimize the tailings. So much for methods of granulating.

Following the granulating process it is necessary to dry the granulations. This requires portable tray trucks to carry the trays of granulated material and it requires either temperature and humidity control drying cabinets or a large drying room similarly equipped. To dry tablet materials rapidly a large volume of warm dry air is essential. I should say on the whole that most firms dry granulations too much. It must be remembered that tablet materials and the tablets themselves contain a sufficient amount of water to maintain a moisture equilibrium. If this is removed completely, the tablet mass or the finished tablets will reabsorb moisture until equilibrium is again established. This does no particular harm in most cases but drying takes time and it requires steam and electricity so there is no point in removing more moisture than is absolutely essential. Moreover, when tablet granulation has been excessively dried, it does not run well on the presses and frequently has to be redampened with water and alcohol before it will run properly.

In the design of truck dryers control of humidity is essential because it prevents case hardening and it makes possible rapid drying of heavy materials—pills being a good example. The value of dryers equipped with temperature and humidity controls consists in the fact that one can use them for very low temperature drying for which vacuum dryers are ordinarily used and one can in consequence reduce drying time accordingly. Vacuum dryers, however, always will find a place because there are a few materials which are affected by air and should be dried in vacuum.

In drying granulations it is axiomatic that the thinner the layer on the trays the quicker will the lot dry and the fewer will the lumps be. It is a common failing to spread granulations too thick on the trays and also to use trays made of cloth which sag in the middle causing the granulation to form a cohesive mass. As a matter of fact it is so important to keep the granulation in a thin layer that what is really needed by the trade is a small continuous dryer in which the individual granulations could be dried as they are carried along belts or screens. Possibly the use of dehumidified air now makes such a device possible. Dehumidified air serves no useful purposes in the ordinary dryer because the material on the trays, even when spread as thin as possible, is still too thick to prevent crusting. Drying therefore simply requires large quantities of warm air at low velocity and provision for the control of temperature and humidity.

The next operation in preparing the granulation is to sieve the dried granulation through screens of the proper mesh and to grind lumps. Then a certain amount of lubricating material is added so that the granulation will not stick in the dies of the tablet presses. There are an immense variety of lubricating materials such as talc, metallic stearates, pulverized stearic acid, mineral oil, etc., the particular material or combination of materials being dictated to some extent by the nature of the granulation and to a larger extent by the fancy of the tablet maker.

When the major part of the starch has been incorporated in the batch before the granulation has been made, the best method of handling the lubrication is to use a rotary drum washer. This permits the use of fifty gallon petrolatum drums both for mixing the lubricants through the granulation and for transporting the lubricated granulation to the compressing room. The method consists of merely screening the dry granulation into a drum, adding the necessary lubricants, and tightly sealing the drum so that it can be rotated without leaking. A few minutes of rotation will disperse the lubricated materials through the granulation and the mixture can then be transported to its proper location in the compressing room. This method saves a transfer and in consequence saves both labor and dust.

It is not applicable however to all types of granulation. If a large part of the starch is added with the lubricating materials, a rotating drum does not provide sufficient agitation to disperse the starch and lubricated materials evenly. Pony mixers are sometimes employed for purposes of lubrication but they are objectionable because they are so dusty. They are, however, convenient since the pony mixer can itself be used for transferring the lubricated granulation to the tablet presses. Powder blenders are frequently used for lubricating finished granulations and serve very well for this purpose, because the granulation is gently handled and sufficient agitation is provided to disperse the lubricants and the starch as well. The equipment and methods used in making tablet granulation are simple; the "tricks "of the trade are caused by the varying characteristics of the many materials required in making tablets.

ENDOCRINE COMPOUNDS

THE OVARIES AND TESTES

By A. RICHARD BLISS, Jr.

In view of the fact that the endocrine secretions of the male and female organs concerned with reproduction are rather closely related chemically, and their actions have at least a superficial resemblance, they will be discussed together in this article.

Histological sex differentiation during the earliest stage of gonadal development of the human embryo is, as yet, impossible. The tubular system is bisexual. In the third week of embryonic life sex is first distinguishable through the appearance of the *testis cords* in the male. For a time, *Wolffian* or male and *Mullerian* or female ducts develop equally in embryos of both sexes. Subsequently, the development of one type predominates, and finally there are only vestigial remains of the other. In mammals, sex is differentiated by (a) the gonad itself, i. e., the ovary in female and the testis in the male; (b) the accessory reproductive organs, viz., uterus, vagina, clitoris and mammary glands in the female, and the seminal vesicles, prostrate gland and penis in the male; and (c) the secondary sex characteristics, characterized in the human by the distribution of the hair, by the voice, and by the enlarged pelvis capacity in the female.

Of the organs which elaborate endocrine compounds, the ovaries demonstrate the greatest degree of regular cyclical change. The time relationship between these changes of the ovary as compared with those of the uterus and vagina varies in different species. The ovary may be considered as consisting of a superficial or *cortical layer*, and a deep or *medullary layer*.

The medullary layer is composed of a highly vascular and highly cellular stroma of connective tissue in which follicles are embedded, together with the products of their denegeration or maturation. In many species there are present also groups of epithelial cells, known as the *interstitial tissue* of the ovary, but this tissue has not been demonstrated conclusively in the human ovary. From the epithelium of the cortical layer, cords grow into the substance of the ovary, and later form small nests of *primordial follicles*, some of which subsequently enlarge to form primitive ova.

Each follicle consists of an external sheath (theca) an internal sheath, and the follicular epithelium which bears the ovum. The follicle projects inward increasing in size as it matures, later extending outward as well, and finally bulging the ovarian surface. A viscuous liquid, the *liquor folliculi*, fills the cavity of the mature Graafian follicle. The human ovary at birth contains thousands of primordial follicles and some developing Graafian follicles.

The ovaries gradually increase in size from birth to puberty. At puberty, the Graafian follicles greatly enlarge, and ultimately rupture and discharge the ova. The rupture closes after the discharge of the ovum, and the cavity fills with blood; connective tissue then invades the cavity. The follicular epithelium multiplies and the cells increase in size, acquiring increasing amounts of lipoid material which is colored orange or yellow in human and bovine ovaries due to the presence of carotene, therefore the name *corpus luteum*. In the rat, mouse and many other species the corpora lutea are not colored yellow.

In the event fertilization of the discharged ovum does not take place, involution and obliteration of the corpus luteum occurs, but if the ovum is impregnated and becomes embedded in the uterus, the corpus luteum is further enlarged, involving about one-third of the ovary, and persists throughout pregnancy.

Most of the Graafian follicles undergo atresia at some stage short of complete maturity and rupture, and are entirely absorbed or are metamorphosed into corpora lutea atretica and finally small corpora albicantes. This phenomenon appears to be associated with some definite stages of the oestrous cycle. With the first ovulation the first sexual cycle, the first *oestrus*, abruptly takes place, accompanied by some characteristic changes in the uterus, and, in the rat, mouse, guinea pig and many other animals, in the vagina. Primates and other mammals show some differences in the cycle.

In the lower animals Heaps has suggested a division of the cycle into:

"Investigators of gonadal activity are fortunate in being able to secure now a series of pure endocrine compounds the composition of which is known, and a number of which have been synthesized."

I. *Anoestrus*, the resting or quiescent stage, which is absent, of course, from the first cycle.

II. *Prooestrus*, the coming on of "*heat*", in which turgescence of the uterus and vagina occur, along with some endometrical changes.

III. *Oestrus*, the period of "*heat*" and of desire.

IV. *Pregnancy, or* a return to *anoestrus.*

The testes of mammals show no such cycle; their functions do not demand any cyclic changes in the secondary sex glands of the male. The endocrine secretion of the testes is considered to be associated with the *interstitial cells* or "*Cells of Leydig,*", epitheliumlike cells which are associated with the intertubular connective tissue, and which form isolated groups of cells in man.

Previous to biochemical investigations of the gonadal secretions, much information of great value concerning the functions of these endocrine compounds and their control of the secondary sex organs was gained by studies of the effects of extirpation and of grafting. Nussbaum, in 1912, showed by his experiments with frogs that the sex characteristics of the male are controlled by a specific endocrine compound elaborated by the testes.

Human males who have been castrated during the first ten years of life show in adult years small, underdeveloped seminal vesicles, prostrate and penis, feminine-like limitation of the pubic hair, no beard, an enlarged infantile larynx, the voice of a prepuberal boy, growth of the long bones beyond the usual time, and in some cases obesity. The effects of post-puberal castration in the human male are less pronounced.

The Early Investigations on Gonadal Endocrine Compounds

Allen and Doisy, in 1923-24, aspirated fresh **follicular liquor** from hogs' ovaries, removed the proteins by alcohol, subjected the filtrate to a series of treatments with lipoid solvents and water, and obtained a fraction, soluble in lipoids, and which was capable of inducing oestrus in spayed rabbits and rats. They secured a similar active fraction from the whole **ovaries,** as well as from *placenta.* Aschheim and Zondek, several years later, demonstrated that the *urine of pregnant women* and of *pregnant mares* are rich sources of this active principle. "*Oestrin,*" "*Folliculin*" and "*Progynon,*" the first names suggested for this principle, have been replaced, since the preparation of the crystalline compound, by **"Theelin"** in the United States and **"Oestrone"** in Canada and Great Britain.

During 1929-1930 several investigators independently produced **crystalline Theelin** (*Oestrone*) from the urine of pregnant women. Marrian, in 1930, and Doisy, in 1931, isolated independently a second crystalline compound which is now known as **"Theelol"** or **"Oestriol,"** and which differs from Theelin by the elements of a molecule of water. This compound is referred to as "*Folliculin-hydrate*" by German investigators.

Experimental evidence suggested four major functions of the **corpus luteum,** viz., (1) inhibition of ovulation during pregnancy, (2) sensitization of the uterus for implantation of the ovum, (3) maintenance of pregnancy, and (4) some part in the development of the mammary glands. Early work on *extracts of corpus luteum* suggested the presence of one compound definitely, and the possibility of a second compound associated with its functions. The first compound, known as "*Progestin,*" "*Corporin,*" the "*Beta-Factor,*" "*Lutin,*" and "*Luteosterone,*" was extracted by means of lipoid solvents, and was shown to be capable of producing the changes typical of early pregnancy and pseudopregnancy in the uterus of castrated rabbits, as well as the continuance of life and normal development of the embryos of rabbits which had been castrated during early pregnancy. Four groups of investigators obtained, independently, this substance in crystalline form in 1934, and the name **"Progesterone,"** by agreement, was adopted for the compound.

Hisaw, in 1935, claimed to have isolated a substance to which he attributed the power of causing the relaxed condition of the pelvic bones in pregnancy, especially

(*Continued on page 584*)

CREAMS

By JOSEPH KALISH

For the purpose of definition, we must limit the term cosmetic "cream" in a more narrow manner than is necessary in merchandising cosmetic preparations. In this article, which is to be a general summary of cosmetic cream formulation, we shall therefore consider only those products which are so consistent that they do not flow and which contain enough water to make them opaque emulsified mixtures. This naturally eliminates liquid creams, which comprise a sufficiently large and complex field to warrant a separate article, and all of those mixtures of fats and oils without water which are used in the same manner as creams but which involve no problems in manufacture other than melting and sufficient stirring to make a homogeneous combination.

The most convenient and generally acceptable classification of creams is on the basis of their emulsion type, namely oil-in-water or water-in-oil.

In oil-in-water creams, oil, fat, or wax particles are completely surrounded by water, the particles being kept from coalescing by a coating of an emulsifying agent. When enough of these particles, or internal phase, are present, the cream will not flow. Physically, this type of cream can be identified by the addition of water, with which it mixes easily, or by the addition of mineral oil, with which it will not mix. This type of emulsion also conducts the electrical current fairly well; the much-advocated test of the addition of oil-soluble or water-soluble dyes (the latter spreading easily, the former not spreading) to determine whether the emulsion is of the oil-in-water type, is not effective with non-liquid products. From the cosmetic point of view, the distinguishing features of oil-in-water emulsions are the fact that they easily lose water by evaporation when kept in poorly closed containers, and that they may be washed off the face without difficulty by means of water. They are less greasy than the water-in-oil creams. Whether or not they themselves, or their components, or the active ingredients they may contain are more or less easily absorbed by the skin than corresponding water-in-oil creams or fat-oil mixtures without water has not been sufficiently well investigated to give a satisfactory answer

Water-in-oil creams, on the other hand, have water as the internal phase and differ markedly in their physical properties from the preceding type. Emulsions of this type are non-conductors of electricity, may be diluted by oil but not by water, and are seldom made as liquids, in which state they are far more inclined to be unstable than oil-in-water emulsions. Water-in-oil cosmetics are much more greasy than the opposite type, will not wash off the skin readily with water because of their structure, are quite stable in air but may break down at increased temperatures, and quite likely have a higher lubricating value than less oily creams.

Oil-in-water creams are exemplified by vanishing creams, foundation creams, brushless shaving creams, some hand creams, etc. The simplest product of this type consists of stearic acid partially saponified with an alkali. An average stearate cream should contain about 6 per cent. of soap and about 15 to 25 per cent. of excess stearic acid, the rest being water, etc. In the past, the alkali used has been, among others, alkaline carbonates and ammonia. The carbonates, although cheaper than the caustic alkalies, are quite unsatisfactory. Theoretically, the final cream should be the same whether the carbonate or the corresponding hydroxide are used; actually, the carbonate releases much carbon dioxide gas when it reacts with the stearic acid (only water is formed when alkali hydroxide and stearic acid react) and it is quite difficult to remove final traces of the gas from the finished cream. The aeration or sponginess of the cream results in poor texture and the cream may slowly collapse in the jar. Ammonia creams are somewhat difficult to prepare because some of the ammonia is inevitably lost in the heating process. Although the ammonia cream is of fine appearance, the ever-present possibility of ammonia loss by evaporation, with destruction of the cream and distinct ammonia odor in the jar, makes it advisable to avoid this alkali.

Sodium and potassium hydroxides, intelligently utilized, give very fine stearate creams. Creams can, of course, be made by melting and stirring together a neutral powdered soap, stearic acid, water, and glycerin, but the direct production of soap as required by interaction between alkali and fatty acid is more convenient. One part of sodium hydroxide will react with approximately seven parts of stearic acid to produce eight parts of sodium stearate soap; one part of potassium hydroxide will react with about five parts of stearic

PHOTOS POSED BY ELEANOR HANSEN
COURTESY RKO

acid to give six parts of potassium stearate soap. The cream made wholly with potassium hydroxide will be softer than one made with sodium hydroxide; mixtures are often used; the hardness also increases as the excess of unsaponified stearic acid becomes greater. The proportion of soap must not be too great, otherwise the product will become soapy rather than creamy in its appearance and action. The total amount of stearic acid and alkali present in general should not exceed 30 per cent.

Some, but not too much of the stearic acid may be replaced by other fatty substances to improve the emollient value of the cream, since the stearate mixture alone is likely to have a drying effect on the skin. These additions include cetyl or other fatty alcohols, spermaceti, lanolin, cocoa butter, vegetable oils, etc. From one to five per cent. of these substances may be present, since larger amounts will change the properties of the cream too extensively.

A cream made exclusively from fatty acid, alkali, and water, with or without the addition of emollients, will not be wholly satisfactory, to some extent because the cream will not rub out smoothly on the skin, but mainly because the cream will lose water too rapidly and shrink. The addition of from 5 to 10 per cent. of glycerin sufficiently retards the loss of water to stabilize the cream and also greatly lessens "rolling" when the cream is rubbed on the skin. A small amount of alcohol may also be present, added as a perfume solvent, while the ethyl ether of diethylene glycol acts both as a perfume solvent and in the same manner as glycerin to retard evaporation of water.

Manufacturing procedure is simple. Oil-soluble components are melted together in one kettle, water soluble ingredients heated with the water in another tank. Both solutions are heated to the same temperature—which must be high enough to melt all the materials

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UP-TO-DATE WITH PLASTICS

By C. R. SIMMONS
General Plastics, Inc.

It's a far cry from the first molded collapsible tube cap to the present cosmetic containers of plactics. But, while this progression has been rapid it has not been sudden. It has taken nearly a decade and the drug and cosmetic industry has been a decidedly interested witness to this change and growth. It has watched the rapid advancement of plastic materials because plastics are almost made-to-order for the industry's demands and concepts of smart merchandising. Where a few thousand pounds of molding plastic materials per year were used eight or nine years ago, a few million pounds were required last year in this industry alone.

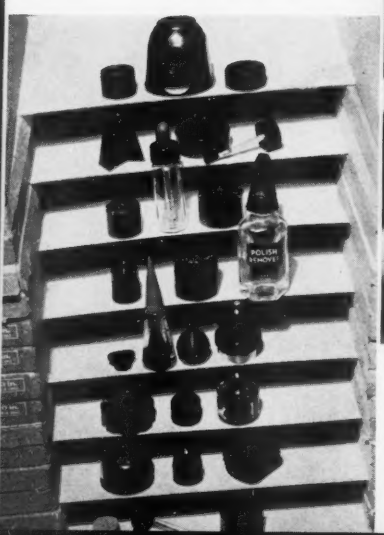
Of course, the plastic materials available today not only permit greater selectivity for the various jobs to be done but are also far superior in their physical make-up to those offered ten years ago. To one material most adaptable then there are three now. But to understand more readily the reason for the advancement in plastics and their continued adaptation to drug and cosmetic merchandising it may be well to review, quickly, the major characteristics of plastics. Plastics are formative materials, usually powdered or pelleted, which may be molded into almost any shape or design by the application of great pressure and heat. There are two general types: one (known as thermosetting) becomes infusible and insoluble as heat and pressure reach a predetermined high point; the other (known as thermoplastic) remains soft and pliable until the heat is lowered. The former can never be given any other shape than in the original mold; the latter may be reclaimed. All of the plastics with which you may be familiar, may be classified under one or the other of these two types.

All of these have several physical properties in common which are peculiar to plastics. They develop a lustrous, smooth surface, which rarely requires polishing, when the piece comes from the mold. They are resistant to mild acids and alkalies, to moisture and atmospheric changes, in varying degrees. Incidentally,

Shapely, colorful cream jars have a rich, lustrous finish in plastics, are moisture-proof, odorless, and not fragile.

Several color combinations can be easily used with this type of plastic container. The two at left are double-shell construction.

Typical plastic closures reveal a wide variety of style and type.



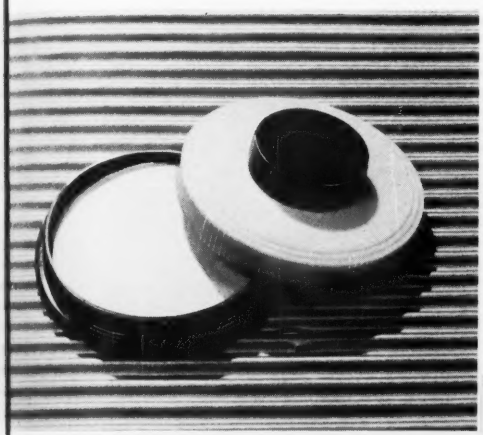
de Markoff's use of transparent plastic material makes for a striking effect in his Fashion Tone cosmetics.

Coty's Tandem Tester promotion was made extremely effective with the use of plastics.

this question of moisture resistance is one on which every closure or container buyer should be satisfied before he places his order. All are very lightweight—having low specific gravity—yet relatively strong. They will stand constant handling without losing lustre and with almost no effect on the surface finish. Most of them can be molded with metal inserts when required for assembly or finishing.

Many of these physical characteristics have been vastly improved during the last few years. Resistance to various chemicals, to water, to heat, has been increased. New types of plastics have been evolved which have full transparency, positive light-fast color and greater strength.

Because many molding compounds will meet certain requirements they are known as standard materials by the manufacturers. They are literally hundreds of such standard types available



A combination cleansing pad container and rouge or lipstick compact (above) fits purses easily and makes carrying convenient.

Probably the best plastic packaging of an entire cosmetic line is that of the Jacqueline Cochrane products, designed by Raymond Loewy (above).

Rouge and powder compacts (left) having inlaid metal strips permit a wide variation of attractive design. Powder boxes consist only of base and cover with powder in paper container.

The molded nest (right) for the Roger & Gallet eau de Cologne bottle makes for one of the loveliest plastic and glass combinations.

now whereas there were but few several years ago. Yet, even these standard molding compounds will not always fill every requirement. However, today, the plastics manufacturer actually knows so much more about his material than he did ten years ago that his laboratory is quite likely to be able to change the formulation of some standard material to meet the new requirement. As an interesting example of this, it was learned at one time that a plastic cap was effecting a discoloration of one particular enamel used on some of the collapsible tube containers of one supplier. Tests proved that an agent used in the formulation of the plastic material was undoubtedly causing this. Another cap material was designed which did not require this agent. The problem was solved and a new molding compound was evolved. While other examples could be cited it is readily recognized that the plastics manufacturers are keenly aware of the necessity of designing new materials to meet unusual or changing requirements.

One of the major problems which has been overcome during the last two or three years is "alcohol bleed." While this was of interest to a few cosmetics merchandisers it did not particularly interfere with their increasing consideration and use of plastics. But in the extract and alcoholic beverage field this problem was a stumbling block for a long time. New formulations now make available many non-bleeding molding compounds and the closure buyer would do well to investigate carefully the materials he selects for this type of service.

Color has come into plastics so that every hue in the rainbow is now available. The thermoplastic materials have always offered color even in tints and pastels. The thermosetting materials have been available in colors, too, but with one drawback. They were not light-fast. But there has been excellent improvement in the colors offered in this group. Experiments have brought forth new dyes which now permit the thermosetting plastics to offer a wider range of color and better color retention.

In addition to the advances made by the manufacturers of plastics have been those made by the molding equipment manufacturers. New and faster methods and machines have been developed. A process known as injection molding has made rapid strides. Automatic molding presses have stepped-up production radically. As a consequence prices in the field have naturally been somewhat reduced.

It may be interesting to review briefly some of the reasons why plastics fitted into the collapsible tube cap field so well. Here are a few: plastic caps do not rust or corrode when in contact with certain pharmaceutical products; they do not discolor these products; they are easily gripped and will screw down tightly yet always loosen easily; threading is as strong as on metal alloy caps and does not strip. Another outstanding advantage is that the closure does not leak, nor do the contents cake or discolor in the mouth of the tube which so often results in strain at the tube's weakest point, the shoulder. Add to these the color factor, which often steps-up sales appeal, and one finds the reasons why there are more plastic closures on tubes today than any other kind.

What has been said of these caps for closures on tubes is just as applicable to plastic closures for other containers, glass, metal, wood. But—with an all-plastic container the question of contents should be given greatest attention. Consider the experience obtained in packaging one of the most recent creations—facial cleansing pads. Not long ago when the originator marketed this idea of a convenient method for carrying cleansing tissues in a "pocket watch" size container he has the first ones made in metal. However, as these pads are moistened with a facial astringent the metal cases rusted and corroded. Then plastic cases were tried. But some of the plastic material used for the base absorbed too much moisture and swelled, causing excessive binding and a certain amount of breakage. The molder, upon investigation, found that a standard moisture-corrosion resistant compound was available. This material satisfactorily solved the problem.

Again it seems essential to stress the need for complete cooperation between the buyer of plastic parts and the custom molder or molding material manufacturer. Here is one business where the manufacturer's service engineer is quick to admit if his particular material will or will not do the job. He will not hesitate to recommend the use of a competitor's material if his is not adaptable. However, the only way he can serve the buyer efficiently is to secure complete information regarding the ingredients of the merchandise to be packaged.

Another development in plastic containers is a double-shelled jar. The inner shell is of a special material which permits the outer one to be of your selection, phenolic, urea, cellulose acetate, whichever material you may prefer. This type of container, through the creation of an air chamber, tends to preserve the contents as well as to prevent loss of moisture through evaporation. Furthermore, it allows unusual color combinations by being a three-piece unit—cap and double-shelled body. Yet it is an exceptionally lightweight unit and shipping costs are held to a low point.

Accompanying this article are many photographs which illustrate the scope of plastics today—in the drug, cosmetic and allied fields. Among the many uses are these: cream jars, bottle bases, manicure kits, shaving soap bowls, powder boxes, compacts, can caps, vials, jigger caps, dispensers, rouge boxes, eye baths, purse kits, applicators, boxes of all kinds, and even display stands and replicas for counter displays. A great many of the items listed are available today from stock molds. Nearly every custom molder has his shelf of such molds. For tube, vial and bottle caps there is, of course, the greatest variety of stock molds available. Rouge, powder and cream jars probably are next. These range from three-quarters of an inch in diameter

by one-eighth inch deep to five inches in diameter and three inches deep. Most of the bases are round. The tops are of varied shapes, either slip-fit or threaded. Many sizes of the double-shelled jar mentioned above are in stock molds. Square and rectangular boxes in a multitude of sizes are obtainable from stock molds. In fact, more than six hundred stock mold parts are available and more than twenty-five per cent. of these are adaptable in the drug and cosmetic industry.

Plastic containers offer the product manufacturer an excellent source for promoting sales by being designed for dual-use. For example, a smart, colored powder box is easily designed for later use as a hair receiver on milady's dressing table, or perhaps as a container for absorbent cotton. A special presentation of a perfume encased in a plastic box which could be used as a jewel case should certainly encourage sales. A plastic manicure kit container might be designed for later use as a cigarette box. Dual-use packaging in plastics is only beginning to come into its own.

There are a great many avenues still open to the wide-awake merchandiser for dressing-up, changing, individualizing his containers through the use of plastics. Almost no other material offers so wide a range of uses. Plastics serve well by themselves but they may be used with other materials as components. Metals such as copper, bronze, chrome, aluminum, plated gold and silver permit extensive variations in decorative and contrast possibilities when used in combination with plastics. So do leather, wood, fabrics, cloisonne, rope, reed, cork, glass decalcomanias. Adding such components to molded products isn't always necessary or even desirable. But on many box or tray items they can be well used to provide a variation of styles from a basic mold. They would add individuality and personality as well as aid in bringing about a "family" resemblance to a given group where such resemblance is desirable. Also, most of these materials are of rather soft texture and would tend to heighten the lustre of the plastic as well as provide attractive contrasts. There's another reason why the buyer should give full consideration to them when changing to plastic containers. Suppose it is desirable from a mold cost standpoint to keep to one or two molds for the entire line of diversified products. Instead of a monotonous sameness, any of these materials may well be used to mark another product yet the use of them hardly affects the cost. The same mold may be made to accommodate the change in component material. Actually, very little has yet been done from this standpoint, which leaves the field wide open for a scoop by the clever merchandiser and smart designer.

Time has proved a valuable ally to the plastics industry. The consuming public now is plastic-conscious and likes plastics. Plastics manufacturers have improved their materials and evolved new ones. Whether opacity, translucency or transparency is desired, in white or colors, today's plastics cover the entire range from deep, rich solid blacks to crystal clears. Solid colors, pastels or mottles are all in the color charts of the producers. While the unusual qualities of plastics have been responsible to a great degree for their universal acceptance, the progress within the industry and the plastic-mindedness of consumers are truly important factors contributing immeasurably to the success of plastics in the closure and container market.

Creams

(*Continued from page 575*)

thoroughly, but not high enough to cause discoloration or charring, and not so high as to waste heat unnecessarily or cause the batch to cool too slowly. About 60 to 70° C. (140 to 160° F.) is the temperature ordinarily required. The oily mixture is added to the aqueous solution with very thorough stirring and stirring is continued at a high speed until emulsification is complete. The agitation must be such as to avoid as much as possible the incorporation of air, and should be slower after the first emulsification, just enough to keep the batch mixed. On standing overnight without stirring, the stearate cream is likely to set to a hard mass. This may be considered to be due to the setting of the soap and excess stearic acid to a gel. This is broken up and the mass stirred again to form a smooth cream which may then be filled cold.

Stearate creams are also made with triethanolamine. This organic base has special properties which recommend it. One part of triethanolamine is equivalent to only two parts of stearic acid, but the resulting soap is completely oil soluble and has high emulsifying power. It is used just like the caustic alkalies. It is subject, however, to slight discoloration and all creams prepared with it are slightly off-white. This slight color can be eliminated while other desirable properties, such as easy emulsification, are retained by using the more expensive triisopropanolamine in the same way.

Oil-in-water creams may also be made without the use of stearic acid and alkali by utilizing one of the various oil-in-water cream bases now available. These consist of either glyceryl or glycol esters of stearic acid with an emulsifying agent, or a fatty alcohol mixture with an emulsifying agent. The procedure in manufacturing these creams is quite similar, regardless of the base used: the base, emollient, glycerin, and water are all heated together until the fatty materials are melted; the mixture is then stirred rapidly until emulsification is completed and then more slowly until the mixture is cold. These creams do not set to gels and need not be broken up and restirred. The stearate esters and fatty alcohols are good emollients in themselves so that it is seldom necessary to add additional materials for the purpose of lessening a drying effect on the skin. Glycerin must be utilized, however, to prevent evaporation from the external phase.

These creams are totally different in their appearance from the customary stearate creams; the stearic acid

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EYE LOTIONS

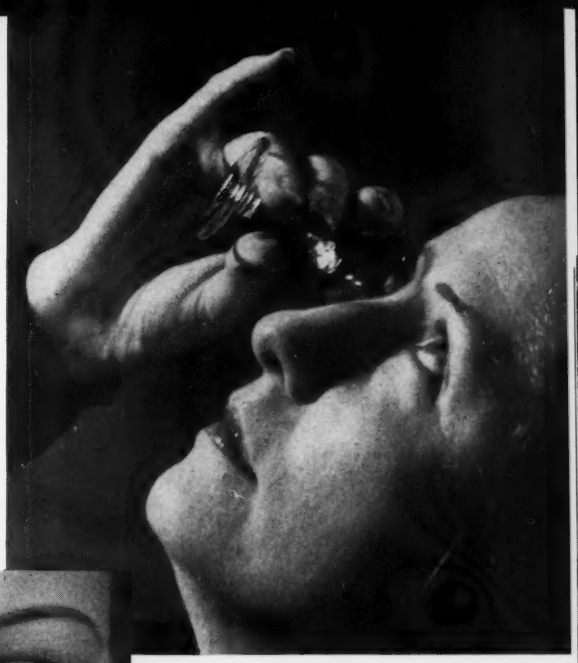
By MILTON A. LESSER

Eye lotions, or collyria, are among the oldest of medical preparations; their history dates back for thousands of years. Some of these ancient formulae were awesome mixtures of fantastic, frequently useless, ingredients. It is only during the last decade or so, however, that these collyria have been taken from the realm of empiricism and given the scrutiny and benefits of scientific study. Even today the modern eye lotion is still a subject for controversy, but the present product is a far cry from the product of not so very many years ago.

In making modern liquids for the eyes such points as pH, tonicity, sterility, clarity, the container and the like are important considerations. Witness to this is The British Pharmaceutical Codex (1934), on the subject of eye lotions, "Collyria—are usually solutions in water of one or more substances. As far as possible they should be sterile, and they should be entirely free from foreign matter. In most cases, the final product should be filtered, preferably through a bacteria-proof filter. When complete sterilization is not possible, the distilled water employed should be boiled. The use of aromatic waters as vehicles should in general be discouraged; when they are prescribed the concentrated water should be diluted immediately before use with freshly boiled and cooled water. Eye lotions should be dispensed in sterile, stoppered bottles of distinctive shape."

For the purpose of this discussion, eye lotions may be divided into two groups; simple solutions, and specially medicated preparations. The first group, including cleansing, soothing and astringent liquids, are very widely used and are applicable for use for normal healthy eyes and for minor eye ailments. More severe ocular conditions require special preparations, such as are found in the second class. These comprise antiseptic, anesthetic, mydriatic and myotic lotions.

After long exposure to wind, glare and excessive strain the eyes are benefited by the application of a soothing, cleansing lotion. Astringent liquids often appear to do wonders to freshen tired eyes. The bathing of the eyes with these collyria serves not only to relieve tired eyes, but also to remove the accumulations of dirt, dust, dried tears and oily secretions. Most of them



are quite easy to prepare. The cleansing and soothing lotions are essentially solutions of boric acid, sodium borate plus other helpful ingredients. One simple eye preparation of this kind is merely a 2% aqueous solution of boric acid. A more complete formula for a simple collyrium, given by Holland,[1] is as follows:

Boric acid	25
Sodium borate	30
Witch hazel water	50
Distilled water, to make	1,000

An alkaline eye lotion, which is frequently recommended, is also given by this author and contains:

Sodium bicarbonate	4
Sodium borate	4
Sodium chloride	4
Distilled water, to make	1,000

Astringent eye lotions as a rule contain some soluble salt of zinc, either the sulfate, the chloride or the salicylate. Zinc sulfate, in ¼ to ½% solution, is most frequently employed, but collyria containing these compounds should not be used indiscriminately. Scoville's formula is a typical preparation:

Ammonium chloride	2.5
Zinc sulfate	5.0
Camphor	3.0
Alcohol	120.0
Distilled water	800.0

Persons whose eyes are exposed to the injurious effects of excessive light radiation, such as from welding arcs, carbon arcs or the like will be benefited by the use of this British formula for a weak antiseptic and astringent eye lotion:

Boric acid	10 grains
Zinc sulfate	½ grain
Adrenaline solution (1 in 1000)	10 minims
Distilled water to	1 oz.

These lotions serve their purpose and have an important place in the hygiene and care of the eyes, but when ocular illness occurs, medical attention is necessary. Eyes are too valuable and irreplaceable to permit of self-medication. The drugs used in preparing medicated eye lotions, however, comprise an important group of therapeutic agents. They find wide use in the treatment of iritis, glaucoma and the various forms of conjunctivitis.

First on the list of the agents employed in the therapeutics of the eye are the antiseptics. In a study of ocular antiseptics, Thomson and his associates[2] tested the antiseptic value of iodine, mercurochrome, acriflavine, chloramine-T, gentian violet, phenyl mercuric nitrate, mild silver protein, merthiolate and silver nitrate. In making these tests they took several factors into consideration; the disinfectant-rate under conditions closely simulating those which occur in human tears, the influence of increased protein concentration on the disinfectant rate; the influence of dilution on the antiseptic rate, and the toxicity of the antiseptic for leukocytes and for lysozyme. While they were not able to say at the time of their report, that one substance is

superior to another, they did indicate that the circumstances under which the agent is to be used would alter the weight given to the various properties. Greeves,[3] discussing the treatment of infective conjunctivitis, states that he finds the mercurial antiseptics valuable. Of these, he prefers a 1 to 8000 solution of mercury oxycyanide as being the least irritating. Black[4] also advocates this agent, in the same dilution, as an antiseptic lotion for washing the eyes after the removal of foreign bodies.

Next for consideration are the anesthetic agents, used on the eye for painful conditions, surgery, medical treatment and the removal of foreign particles. Most of the standard local anesthetics are applicable for such purposes, but some offer advantages and safety factors not found in others.[5] Schonberg,[6] for example, recommends the following topical anesthetics for use in treating acute conjunctivitis. These include 2% butyn solution, 1% holocaine solution and ½% pontocaine solution. He advises against the use of cocaine, because of its deleterious effect upon the cornea. Bellow's[7] comparison of the surface anesthetics used in ophthalmology, shows that the longest duration of anesthesia is produced by nupercaine. The degree of insensitiveness and its duration are quite marked with butyn and cocaine, moderate with phenacaine and slight with metycaine.

The chief ingredients of the mydriatic eye lotions, which are usually administered as drops, include atropine, homatropine, scopolamine, eumydrine and cocaine. These drugs are used for dilating the pupil and relaxing the accommodation of the eye and are employed in ophthalmology to aid in diagnosis and treatment. Since these are very powerful drugs, the mydriatics are used in very dilute solutions, a few drops being applied to the conjunctiva to produce marked local effects without affecting more distant organs.[8] It is obvious that they are safe for use only in the hands of physicians trained in their application and dangers.

The myotics produce effects opposite to those of the mydriatics, that is, they cause contraction of the pupil and ciliary muscles of the eye. Physostigmine salicylate and pilocarpine nitrate are the drugs employed in making myotic lotions or drops. These liquids, in weak solutions, are administered in glaucoma to relieve intraocular tension, for hastening the clearing up of corneal ulcers, and for speeding recovery from the effects of mydriatics. The following mixture has been recommended for use in glaucoma.[9]

Cocaine hydrochloride	0.02
Physostigmine salicylate	0.01
Distilled water	10.0

Various combinations of drugs are employed in treating eye conditions. The late war in Spain has brought an increase in the number of cases of trachoma, a highly infectious form of conjunctivitis. In treating the refugees and other victims of privation and squalor resulting from this holocaust, particularly in Catalonia where the problem is especially acute, the following has been successfully employed both for prophylaxis and therapy:[10]

Zinc sulfate	5
Mercuric chloride	0.4
Methyl violet	0.6
Water to	1,000.0

In passing, it might be mentioned that sulfanilamide has been tried in the treatment of trachoma in this country, with such encouraging results as to be further employed on a large scale.[11]

Solutions of fluoresceine are frequently employed in ophthalmology to outline the degree of injury caused to the corneal epithelium by foreign bodies, ulcers and the like. These diagnostic solutions are also used to disclose the rate and degree of recovery. A typical liquid of this kind contains:

Fluoresceine	0.3
Sodium bicarbonate	0.6
Distilled water to make	15.0

It has been generally recognized during the last few years, that eye lotions, like other pharmaceutical preparations, well warrant care and consideration in their preparation. A properly made lotion is not only a better product but a more efficient one as well. One of the first problems to be tackled in preparing better eye lotions was an improvement in the water employed for making these liquids. Henrioul[12] points out that commercially distilled water may contain ammonia, lead, iron and copper, which apart from their intrinsic undesirability, may cause decomposition or precipitation of some of the essential constituents. He advocates that water for ophthalmic use be redistilled.

Obviously all eye lotions should be free of suspended materials and precipitation. These defeat the purpose of collyria by causing irritation to the eye. Methods and equipment for filtering these fluids are readily available, so that there is no reason why eye lotions cannot be clear and sparkling. Filtering in the cold is a standard procedure, to prevent future precipitation. But even a clear product, made with every precaution, may show precipitation at some time after packaging. In many instances this most unwelcome condition may be traced to reaction of the lotion with the glass. The bottles and other glass containers usually employed, often yield much alkaline material to the collyrium. Sodium glass is better in this respect than potassium glass. The alkalinity produced may have deleterious effects on the medicating ingredients and ruin the product. Silicates dissolved from the glass may be responsible for the presence of a perceptible sediment or of floating fine particles that are visible to the naked eye. Where possible, then, special resistant glass should be employed for packaging eye lotions. Modern ampoule glass is particularly noteworthy in this respect, not only is it relatively inert to the action of the contained solutions, but also to the effects of heat. This latter point is especially important where sterilization is employed. Glass bottles with these desirable qualities may be obtained and should be used if it is desired that the product be maintained in its initial condition. All bottles

used for collyria should be sterile, and at the least should be rinsed with boiling water before use.

In most instances, a properly made eye lotion requires no preservative. However, the possibility of contamination and resultant spoilage is ever-present when the bottle is opened repeatedly. When a preservative is required, there is a fairly wide selection of effective agents. The esters of parahydroxy benzoic acid are considered effective preservatives for eye lotions. In collyria 0.2% of methyl ester, 0.15% of ethyl ester and 0.05% of propyl ester are employed. These esters are said to be harmless.[13] If the eye lotion is to be diluted before using, glycerine is often advocated as a suitable preservative but in the final dilution the glycerine concentration should not be more than 6 to 8%.[1] More than this would be irritating. Henrioul states that 8-oxyquinoline sulfate has been employed as a preservative for eye preparations.

In view of the fact that eye lotions are so often used to treat abnormal ocular conditions caused by pathological organisms, sterile liquids only should be used. Sterility is most definitely indicated in preparations that are applied to eyes with actual lesions or injuries. Where feasible, such liquids should be dispensed in ampoules and sterilized by autoclaving or by tyndallization. This, of course, can only be done if the ingredients are thermostable. Heat-labile ingredients make it necessary to employ other methods to remove bacteria. Filtration-sterilization may be achieved by many types of equipment which mechanically exclude dangerous organism. The Berkefeld, Mandler, Pasteur-Chamberland and Seitz filters are all widely employed and work, more or less, on the same principle. Jena sintered glass filters have also been advocated for use in filtration-sterilization, and while they have the advantage of being readily cleaned and sterilized, are often too coarse-pored to retain all bacteria. Bottles, which are much more generally used than ampoules, must of course, be sterilized.

With the soothing, cleansing and astringent eye lotions for general use, such extensive precautions are not necessary. Preparation and packaging of these solutions under reasonably sterile conditions are, however, still essential to maintain the standards of purity and cleanliness expected of such liquids.

It is only recently that the question of the relative importance of hydrogen-ion concentration and of isotonicity in eye lotions has been brought to the fore as a major issue. Each view has its own advocates who present convincing arguments to substantiate their own views. In this country, Gifford and Smith[14] are the champions of proper reaction in eye lotions. It is their belief that the reaction of the commonly used collyria is the chief factor in the irritation felt when they are used in the conjunctival sac. They point out that a physiological solution of sodium chloride with a pH of 8 to 7 produces no sensation on the eye, but that a slightly acid or a slightly alkaline solution produces a slight feeling of irritation and some congestion. More acid solutions cause severe burning and congestion. To overcome these untoward reactions, Gifford and Smith advocate the use of buffered solutions which maintain the desired pH. They point out that salt solutions ranging in concentration from 0.03-1.5% produced no irritation, provided the reaction of the solution was kept at a pH of 7.6. Buffered eye lotions are said to be less irritating, more readily absorbed and more stable. Buffer solutions have the advantage over physiologic salt solutions as an eye-medication medium in that, fungi and bacteria do not grow in them readily. Solutions applied with ordinary dropper tops, which are exposed to air when used, remained clear for several months. It is also maintained that some drugs work more efficiently in an acid medium, while others require an alkaline medium for the utmost results. In non-specific cases the pH of tears is accepted as the best medium reaction.

In the case of lachrymal secretions, there appears to be no definite agreement as to a standard reaction. Hosford and Hicks[15] found that the average pH of tears for healthy eyes is pH 7.35. Henrioul, however, states that the pH of the ocular secretion is normally between 8.4 and 8.6. He recommends that the most effective pH for collyria is 7.8 since it is desirable for the solution to be more nearly neutral than alkaline than the ocular secretion. However, the reaction of tears is generally accepted as being pH 7.4. More or less on this basis, Gifford has prepared a series of standard buffer solutions for various drugs, as follows:

(Acid) Solution No. 1

Boric acid	6.2Gm.
Potassium chloride	7.4Gm.
Distilled water	1,000.0cc.

(Stock Buffer) Solution No. 2

Sodium bicarbonate	21.2Gm.
Distilled water	1,000.0cc.

(Alkaline) Solution No. 3

Solution No. 1	50 parts
Solution No. 2	1 part

Solution No. 1 has a pH of approximately 5.5 and serves as a solvent and medium for cocaine, zinc salts, epinephrine, butyn and phenacaine. Solution No. 3, pH about 7.6, serves similarly for atropine, homatropine, physostigmine, pilocarpine and scopolamine.

The belief that eye lotions should be isotonic with tears is the older of the two views, and this, too, has its strong adherents. As explained by Mellen and Seltzer,[16] "The purpose of adjusting the osmotic pressure of solutions to be instilled into the eyes is to obviate the discomfort, or even pain, which, depending upon the sensibility of the patient, results when the collyrium has a different osmotic pressure than that of the surrounding tissues; which discomfort continues until the equilibrium is restored." It is due to this difference in osmotic pressure, that distilled water, for example, when used in the eye, causes discomfort. Tears, however, cause no discomfort because no difference in osmotic pressure

(*Continued on page 585*)

Creams

(*Continued from page 579*)

ester combination are much more translucent than those consisting of soap and excess stearic acid. It is almost essential to add a small amount of mineral or other oil in order to make them white and opaque. To a lesser extent, this is also true of the fatty alcohol creams. For certain special purposes, however, creams made with these bases are to be preferred.

Much has been made recently over the requirement that creams be slightly acid in order to conform to the reaction of the skin surface. As a matter of fact, ordinary stearate creams because of their high excess of stearic acid are already slightly acid, pH value of approximately 6. If it is desired, however, to make a cream which is more strongly acid, as for example a feminine hygiene cream, special emulsifiers must be used. The glycol or glyceryl stearates or fatty alcohol mixtures may have soap as the emulsifying agent, in which case the creams will break down on the addition of acids. If an acid-stable cream is required, a special emulsifier with these bases would have the desired properties.

Pearliness is apparently still desired by some manufacturers; this is possible only with stearate creams containing an absolute minimum of emollient or preferably none at all. The addition of glycerin, alcohol, or oleic acid may be useful in promoting the development of pearly luster. Only long standing with occasional stirring will develop this luster, which is probably due to the formation of minute crystals of either stearic acid or an acid stearate.

Beeswax-borax cold creams belong to the oil-in-water classification, although inversion of phase sometimes takes place on standing. Chemically speaking, these creams are very similar to the cream base products just described in that wax alcohols and esters play the same part as the glyceryl monostearate in stabilizing the emulsion, while free fatty acid reacts with borax to form a soap. Creams of this type, however, are able to hold much more oil and make very satisfactory cleansing creams.

Water-in-oil creams include cleansing, tissue, and other oily types. The most typical examples of this group are made with either lanolin, or an absorption base. It is necessary, in incorporating water into these substances, to work at as low a temperature as is comfortable, in order to make a stable emulsion. These materials are heated to the point where they are just barely melted and water at the same temperature is incorporated a little at a time. Creams are hardened by adding waxes to the melted lanolin or absorption base, petrolatum is often added to increase oil-holding power, and the more water emulsified the whiter the cream and the firmer its consistency. Oil is used to give a softer cream with less drag.

Endocrine Compounds

(*Continued from page 573*)

evident in pregnant guinea pigs. He named this substance "*Relaxin*," but there has been no definite confirmation of the existence of such a compound. Some investigators are of the opinion that the relaxation may be due to Theelin, Equilin or some other compound.

Collip, Wiesner, and Hirose and coworkers were among the investigators who demonstrated rather early the presence of oestrogenic material in the **placenta**, which produced many corpora lutea in rabbits, simulating the effect of implants of anterior pituitary. By acidifying an acetone extract of human placentae and adding an excess of alcohol, Collip obtained two fractions which contained two different principles, i.e., a *precipitate* and a *filtrate*. When the *precipitate* is purified by successive re-solution in water and reprecipitation with alcohol, a preparation is finally obtained which induces the anterior pituitary-like effects just mentioned. When injected into immature rats three weeks old, this substance induces oestrus in from three to five days. Collip named this active compound the *anterior-pituitary-like principle* or the **"A-P-L principle."** It has not yet been crystallized or isolated in established pure form. The substance behaves like a protein, and to be effective it must be administered by hypodermic injection.

When the alcoholic *filtrate* is concentrated by removing the alcohol, acidified, and then extracted with ether, **Emmenin** remains in the aqueous fraction, while some Theelol (Oestriol) is present in the ether extract. Its identity has been definitely established, and it has been obtained in crystalline form. When the Emmenin fraction is autoclaved in acid solution, it becomes ether-soluble, a suggestion that it is an ester of Theelol. It is effective orally and by injection. It rapidly induces oestrus in immature rats, but induces no definite change in the ovary. It produces practically no effect on adult castrates, and has no effect on the cycles of normal adult rats or on the normal course of pregnancy or lactation. The differences from Theelin (Oestrone) in these respects are obvious.

The male animal is affected by the "A-P-L principle," marked increases in the size of the accessory reproductive organs being produced, especially the seminal vesicles and prostrate gland, although the actual weight of the testes is not materially affected.

Collip obtained concentrates from urine which seemed to correspond with the "A P-L principle" and with Emmenin. Zondek's "*Prolan from urine*" is probably identical with A-P-L of the placenta.

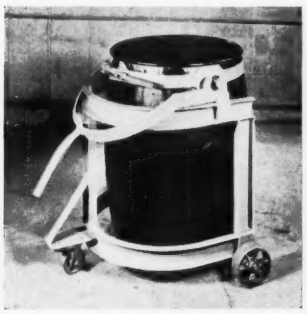
In 1927, McGee was the first to conclusively demonstrate that a benzene extract can be made from the **testes** which induces comb-growth when injected into capons. This has been confirmed by other investigators. It has been shown further that the same principle, or

some similar substance, is present in the urine of men and that it is present also (traces) in the blood of bulls. Preparation of these concentrates is accomplished by the extraction of testes or urine with lipoid solvents. In 1933, Butenandt was the first investigator to definitely obtain the substance in pure crystalline form, and to establish its composition. He named it **Androsterone.** It has been estimated that 2,000,000 Liters of urine contain 1 Gram of Androsterone.

(*Continued in the June issue*)

CHEMICAL STOCK ROOM

Every chemical stock room is required to deal with dozens and sometimes hundreds of open barrels and drums of various kinds of chemicals used in the preparation of drugs and cosmetics. In the larger chemical stock rooms the problem of weighing out formulas is one of considerable magnitude because of the number of materials involved and the distance which must be traveled on the one hand by the man who does the weighing out or by the materials themselves on the other. In some chemical stock rooms the weigher goes to the original container for his supply of materials. In other departments the materials are brought to a weighing bench. The latter is by far the faster and more economical procedure.



The problem of transporting these barrels from their storage locations to a central weighing place is one which requires fast transportation equipment. It is, therefore, the common practice to place each barrel or drum on a dolly. This makes the container instantly mobile the moment it is touched. Handling barrels on dollies is very much better than the use of trucks all of which require a certain amount of manoeuvering to pick the container up and eventually to set it down again. Moreover, the use of trucks usually requires wide aisles.

The use of dollies, however, has certain inherent limitations. In the first place, every container that is used with any degree of frequency should be mounted on an individual dolly. The number of dollies thus required is considerable. Dollies require a fairly substantial investment in equipment. Besides, they cannot be used at all when space limitations make it necessary to stack open barrels and drums on shelves. There is an apparent need, therefore, for a device which could be moved up to a barrel or drum to pick it up quickly without complicated time-consuming adjustments. The Wiesner-Rapp barrel handling truck has some possibilities. This truck is a three-wheeled affair having an embracing cradle which fits around a drum. A toggle clamp is dropped over the edge of the drum and a raising lever is pulled down to elevate the drum from the floor. This unit does take some adjustment and is not quite so mobile as a dolly.

Eye Lotions

(*Continued from page 583*)

exists. Therefore, advise these workers, the discomfort attending the use of eye lotions can be avoided by adjusting the osmotic pressure and making them isotonic with the lachrymal secretions previous to use.

In making eye lotions isotonic with tears, it must be considered that the ocular secretion has been found to be equivalent to 1.36 to 1.46% of sodium chloride. The osmotic pressure of collyria should be made equivalent to that produced by a 1.4% solution of the salt.[12] In the manufacture of properly isotonic eye lotions, several methods are used. Generally, the usual procedure consists of adding the correct amount of a dissociating salt to the active ingredients or ingredients of the collyrium so that the solution has the same tonicity as, or is isotonic with, tears. In choosing these added salts, usually sodium chloride or boric acid, the question of compatability with the chief medicating ingredients must always be borne in mind.[1] The following British formula is an example of an isotonic eye lotion:[17]

Zinc sulfate	2 grains
Boric acid	50 grains
Solution of hamamelidis	120 minims
Tincture of euphrasia	20 minims
Rose water, to	4 fl. oz.

(A preservative is needed for this mixture, one of the esters of parahydroxy benzoic acid may be used.)

Although pH adjustment and isotonicity appear to be conflicting views, it is generally believed that both of these characteristics may be achieved in most cases in the same preparations. Henrioul advocates adjustment of both factors to produce satisfactory collyria.

The modern eye lotion is nothing like the old-fashioned "eye-wash". Properly prepared, adjusted and sterilized, they offer a marked advance in the hygiene and therapy of the eyes. Eye lotions, however, are far from perfect products and there remains much to be learned concerning their usefulness and effectiveness.

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Smart CONTAINERS flash the VALUE signal that starts store talk . . . that SELLS merchandise!

"NATIONAL" strikes an *individual* note in Package design and color values. "NATIONAL" pledges *money's worth* in original ideas . . . in product expression.

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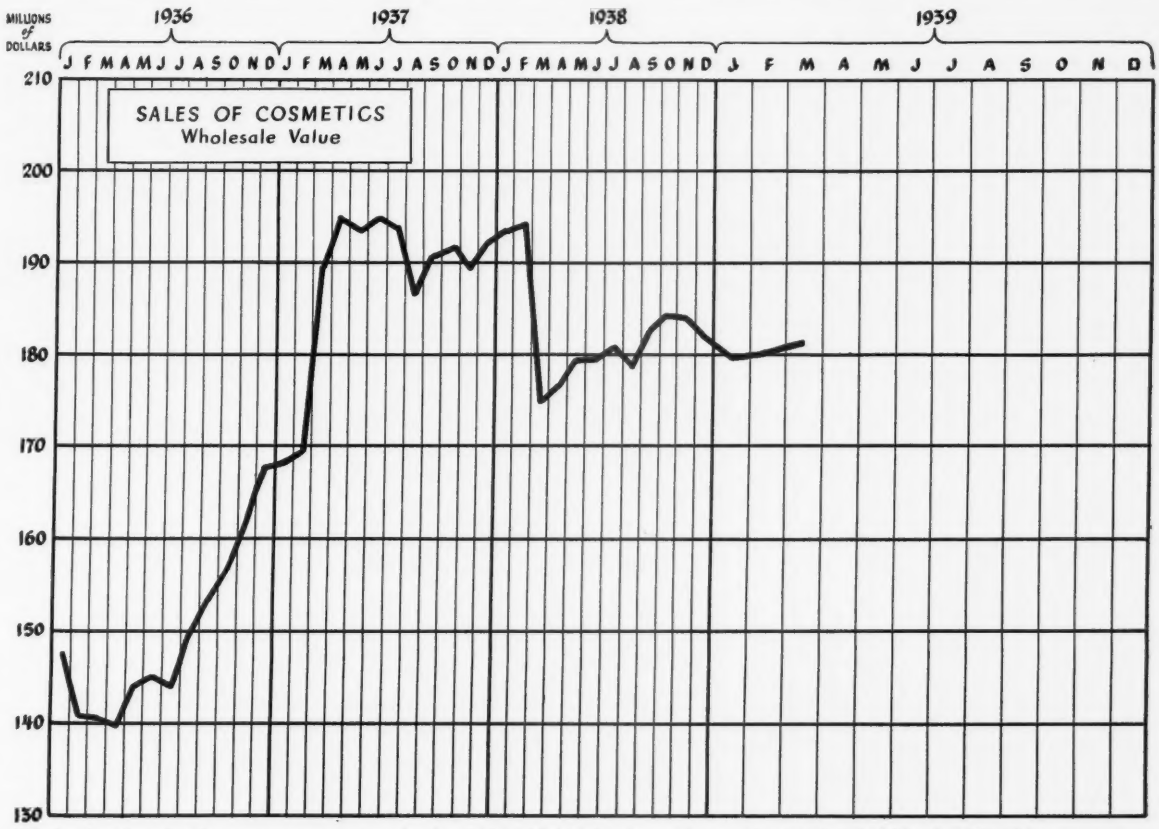
MERCHANDISING NEWS and PACKAGING NOTES

THE COSMETIC TREND: The approaching vacation season and its accompanying beach fashions may be expected to make a solid contribution to the sale of general utility cosmetics. It will make itself most noticeable in the demand for liquid make-up, shaded talcums, skin lotions, hair bleaches, deodorants, depilatories and similar articles, which all will find more than usual representation in beach promotions. Buyers in small and medium cities are in the market for travel sets of cosmetics and will promote them early in the summer in expectation of a pre-season tourist demand.

Perfumes continue along established lines. In the absence of any definite trend counters will underline the luxury appeal of fine perfumes and centre their sales activities upon sizes and quality.

The shade selection of lipsticks and nail polishes is taking on more concrete form. The trend is to lighter and brighter shades and a renewed drift to pastel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SALES OF COSMETICS
Wholesale Value

Wholesale sales of toilet preparations were valued at $181,209,000 for the twelve month period ended March 1939. This represents an increase of six-tenths of one per cent. over the $180,128,000 reported for the twelve months ended February 1939 and an increase of 3.6 per cent. over the $174,903,000 sales for the year ended March 1938.

Pre-evaluation of Packages?

HERE'S HOW *Ritchie* DOES IT!

1. Will the package adequately protect and, if necessary, preserve the product?
2. Will it maintain its appeal after shipping and handling?
3. Is it designed to fit the likes and buying habits of its particular market?
4. Is it, for the dealer's sake, easy to stack and wrap?
5. Does it have definite display advantages over competitive packages?
6. Does it accomplish these things *economically* — without placing an undesirable price premium on the product?

IF YOUR PACKAGE can pass the Ritchie test, it's good — and we should advise you to hold on to it. If it can't — there's no better time than now to let Ritchie help you. No better time to give your product the packaging advantages of all that Ritchie has learned about design, production and service during 73 years of sound experience! Write today.

NEW *Ritchie* TRANSPARENT PACKAGES SCORE 100%

Important 1939 packaging news was Ritchie's entrance into the transparent field. Whether you think you can use a transparent package or not, ask to see what Ritchie is doing for others with this exciting new medium. You may get some good ideas!

W. C. *Ritchie* AND COMPANY

8847 BALTIMORE AVENUE • CHICAGO

SET-UP PAPER BOXES
FIBRE CANS
TRANSPARENT PACKAGES

NEW YORK DETROIT CINCINNATI LOS ANGELES ST. LOUIS ST. PAUL DENVER HOUSTON

effects. Blue, leaning to red and gold, is the most outstanding undercurrent. Shade designations are losing a great deal of their conventional meaning and "try-on" facilities will be indispensable at the counters until the customers have familiarized themselves with the new shades. Yellowish shades become a distinct possibility for Fall.

The purple hues of the past winter have about had their day, and if a radical swing is made to the yellowish or brownish undertones, it will probably be done very gradually first through true red tones which are always resorted to during a transition period and gradually evolve themselves into one undertone or another depending on the fashion colors. Prophesies for the fall as usual favor brown as a popular fall shade, but it is almost impossible to attempt a guess with any degree of accuracy just yet. It will be at least another month or so before anything tangible will develop. At the moment practically everyone is busy with brilliant red hues which will no doubt supplant the delicate pinks prepared for early Spring. These shades are unlikely to succeed because women today like the idea of looking cosmeticized and the pale pinks do nothing dramatic for them. Consequently, they are likely to suffer an early death and be replaced by the reds—clear and dramatic.

Powders feature both pastel and brilliant effects, with blueish tones in the pastels and a trend to natural shades in the other. Tinted talcums are growing in popularity with men customers.

Hand preparations are just as necessary in the summer as in the winter and should be given attention. As a rule, manufacturers feel the season for them is during the harsh weather, but completely overlook the possibilities of the spring when sudden change of temperature raises havoc with hands, and particularly in the summer when ladies abandon indoor pursuits and begin to think in terms of gardening. Then too, exposure to the sun makes it imperative to use hand preparations.

POLYNESIAN PROMOTION: Revlon's nail enamel, Chevalier Garde's lipstick, and the Ho-a-nani-Hawaiian cosmetics are included in the Polynesian Heitiki promotion that leading department stores will feature throughout the country starting May 1. The promotion which promises to high-light the presentation of vacation clothes in department stores throughout the country, embraces ready-to-wear and accessories in the medium priced brackets. Manufacturers have created merchandise suggested by a very comprehensive collection of source material which was gathered in Polynesia by Truman Bailey, designer, photographer and writer, who visited Japan, China, Indo-China, Siam, Java and Polynesia, looking for a background for a fashion theme.

In conjunction with this nation-wide promotion on Polynesian fashions, Revlon has created another new nail tint, called Amoa Red, the only nail shade created expressly for the Polynesian Heitiki promotion. Amoa Red is described as a stark, sharp, "danger-signal" red; a vivid departure from the gypsy rose-red of the recently introduced "Tringar." Amoa Red is presented expressly for the splash prints and vivid tropical colors of the Polynesian promotion only, as a compliment to the bright red hats and handbags that have gained favor and as a clear, brilliant accent for suntanned hands.

Chevalier Garde has created an appropriate lipstick shade which will be known as Polynesian Red—a clear, true red, with no orange or blue undertones. The Ho-a-Nani Hawaiian cosmetics of course, fit in perfectly with the whole idea of the promotion.

The interesting feature of the promotion is the fact that many diversified manufacturers have worked together on a single project—a tendency which cosmetic and perfume manufacturers very wisely do their utmost to encourage. For fashions sell cosmetics throughout the store when tied in with a promotion of this kind.

ADSORBENT DEODORANT: Nonspi Company, maker of one of the better-selling liquid deodorants, has announced a new product, Nonspi Cream, described as a deodorant and anti-perspirant. According to the announcement, the new Nonspi Cream "contains an entirely different ingredient in this field, giving the customer double protection."

"Whether you prefer cream deodorants for steady use," the announcement continues, "or for those occasions when a liquid is inconvenient, you will welcome Nonspi Cream for its outstanding advantages: 1. Checks both perspiration and odor from 1 to 3 days; 2. Feels and looks like velvety vanishing cream. Goes on easily—dries almost instantly. Not greasy; 3. May be used directly after shaving; 4. Has a reaction approximating that of the normal skin—so cannot injure either skin or clothing; 5. Works on a new principle—'adsorbs' odors."

Although the announcement maintains a discreet silence, the label indicates that the active ingredient is aluminum hydroxide, gel. The jar retails for 50 cents.

All the variety you need

FOR

61,000,000 LIPS

The Majority of Brands in Leading Stores have Scovill-Made Containers

At smart Saks-Fifth Avenue, there are cosmetics made by 18 manufacturers. 67% of these manufacturers have come to Scovill for one or more containers in their line.

To capture the varied tastes of America's 30,288,552 women between the ages of 17 and 49 — it takes a range of designs and finishes such as Scovill offers you.

For lipsticks and other cosmetic containers and closures, Scovill makes containers whose variety of styles is only slightly indicated in the illustration (a sampling of current production).

Every color of the rainbow — *combinations* of colors — brass, plain, enameled, or plated with gold, silver or chromium — Indurited aluminum (the Scovill finish that *keeps* its jewel-like sheen, highly resistant to water, scratches, etc.) — various types of construction, such as swivel, roll-top and push-up.

No matter what type of container or closure interests you, a Scovill representative will gladly show you a group of varied examples of our work. For development of new ideas and designs, our stylists and engineers are ready to serve you. Whichever you want, get in touch with the nearest office listed below.

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Boston, Providence, New York, Philadelphia, Syracuse, Pittsburgh, Chicago, Cincinnati, San Francisco, Los Angeles. IN CANADA: 334 King St., East, Toronto, Ontario.

ZONITE PRODUCTS CORP.

ZONITE PRODUCTS CORP.

Zona Cream, manufactured by the Zonite Products Corp., of New Brunswick, N. J., is packaged in Kimble glass vials which were selected as unit containers because it was necessary to package single applications in such a manner that they could be easily and esthetically applied.

LANDER CO.

LANDER CO.

Elizabeth Post Almond Lotion is a leading item in the complete line distributed by the Lander Co., through the S. H. Kress stores. An additional band of decoration in the glass at the base of the lotion bottle made up of small rectangles of glass has been adopted for incorporation in the mold. Feminine in character, this addition to the decorative features of the bottle has added to its attractiveness and its pleasing display of contents. Bottle supplied by Owens-Illinois.

MAISON JEURELLE

MAISON JEURELLE

To symbolize the spirit of apple blossom time, Maison Jeurelle, has filled enormous, luscious pink twin apples with fragrant pink Apple Blossom bath salts and Apple Blossom dusting powder. The decorative apple containers still retain part of their leafy foliage. The perfume in these toiletries is a rich fragrance of the apple orchard in full bloom.

HELENA RUBINSTEIN

HELENA RUBINSTEIN

Helena Rubinstein calls her new kit "Beauty in the Making" because it is designed to help guard a woman's beauty 24 hours a day at home or afield. There are generous sizes of five beauty preparations in the kit, which comes in lizard grain fabric in black, brown or red, and which snaps shut to form a smart pocketbook complete with handle. The kits are individualized for the dry skin and for the normal or oily skin, and retail for only $2.

A. A. VANTINE

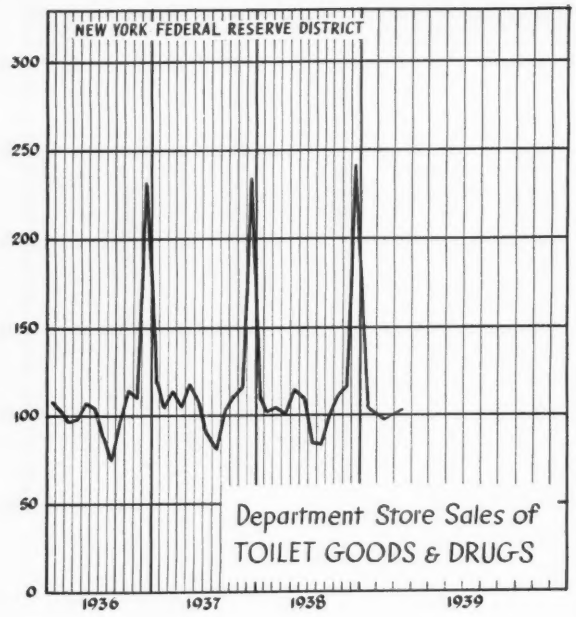
A. A. VANTINE

Vantine's new spring line of toiletries and bath preparations includes talcum powder, dusting powder, toilet water (2 sizes), bath crystals, bath oil (3 sizes), brilliantine, sachet and perfume. Each item is available in five floral fragrances and in five bathroom colors. The entire line is popular priced and is designed to help the retailer sell complete bathroom ensembles rather than individual items.

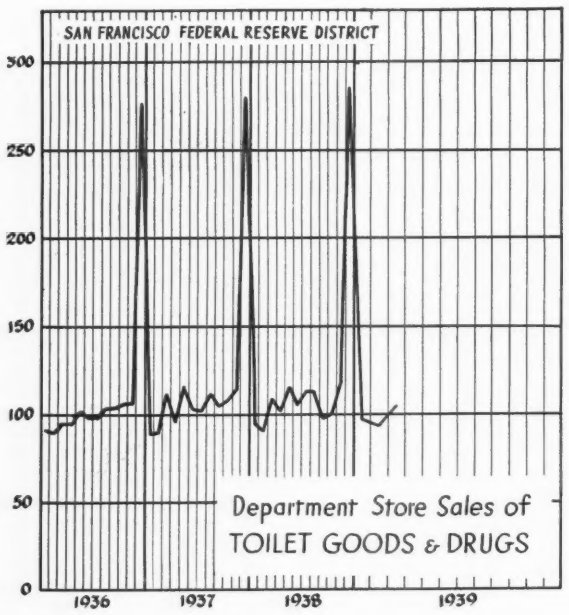
ALLEN B. WRISLEY

ALLEN B. WRISLEY

Allen B. Wrisley has designed a new dusting powder box which comes in shiny brilliant colors to look like a band box. The buckle on top actually has to be opened in order to remove the cover of the box.



Sales of toilet articles and drugs by department stores in the New York Federal Reserve District were 2.1 per cent. less in March 1939 than in the same month of 1938. The corresponding unadjusted index numbers were 101.8 for March 1939, 97.5 for February 1939, and 104.6 for March 1938.



Sales of toilet articles and drug sundries by department stores in Los Angeles were 5 per cent. less, in San Francisco were one per cent. less, in stores of the Pacific Northwest were the same, and in the whole San Francisco Federal Reserve District averaged 3 per cent. less in March 1939 than in the same month of 1938. The unadjusted index numbers for the whole district were 104.9 for March 1939, 93.5 for February 1939, and 108.1 for March 1938.

P. & G. MERCHANDISING: Something of how a big company works when it contemplates marketing a new product is told in the April issue of *Fortune* in describing Procter & Gamble's preliminary steps in marketing "Teel." Head of the company's market research department is Dr. D. P. Smelser and, according to the *Fortune* story, "The Smelser shock troops are a couple of dozen young men and some 50 young women who roam all over the country asking questions of typical householders. The testing technique varies according to the locality and the occasion, but there are certain constants that can be illustrated with an account of the preliminary surveys for Teel.

"Teel was placed on the market in 1938 and a couple of years before that the market research department began consulting the public as to its preference in the matter of liquid dentifrices. First there were rudimentary probings to discover the color, flavor and viscosity consumers favored. To establish color preference, an interviewer would be sent out with bottles of blue Teel and bottles of red Teel, or green Teel with yellow Teel, to ask something like, 'If you were purchasing a bottle of liquid dentifrice, which color would you prefer?'"

"The red was finally selected after a long process of elimination, likewise the flavor—indiscernible, but faintly spicy—and the viscosity, indescribable, but free flowing. After Teel had been cut to fit these whims a second and more ambitious campaign was begun.

"This time the interviewers were given a comprehensive assortment of tooth pastes and powders and dispatched to ask, 'What dentifrice do you use?' If the answer happened to be Dr. Lyon's,' then a can of Dr. Lyon's powder was produced with the brand name removed. The interviewer would then say, 'Would you mind using this tooth powder for one week, and this' (producing a bottle of Teel) 'for a second week and deciding which one you prefer?'

"Two weeks after the samples were distributed the interviewer would call back and ask which dentifrice had been selected. That Teel can now be purchased in drug stores is sufficient indication that a healthy percentage of tooth brushers preferred the liquid dentifrice to their customary preparation."

Fortune did not overlook Procter & Gamble Company's persistence in conducting contests, reporting that it has distributed $400,000 in the last five years, not to mention huge quantities of merchandise.

"With the exception of one rather minor Drene contest last year," *Fortune* reported, "all the foregoing prizes were awarded in connection with contests built around Procter & Gamble's six leading products. To promote the smaller brands, and to supplement the contest agitation in the big six, P&G resorts more or less constantly to a variety of premium offers. Some are store premiums and others are mail-in premiums. To reach those who presumably neither visit stores nor read advertisements nor listen to radios, Procter & Gamble dispatches door-to-door canvassing crews to distribute coupons for or toward the purchase of one of

the brands. Finally, the company actually sells a substantial amount of soap for its own sake—soap that people need and buy to wash dishes or take a bath and not only to collect pourboires.

"The premium method of stimulating sales is viewed with suspicion by a good many advertising men, and P&G's competitors (who have been forced to adopt the same technique to a certain extent) are pretty vehement about it.

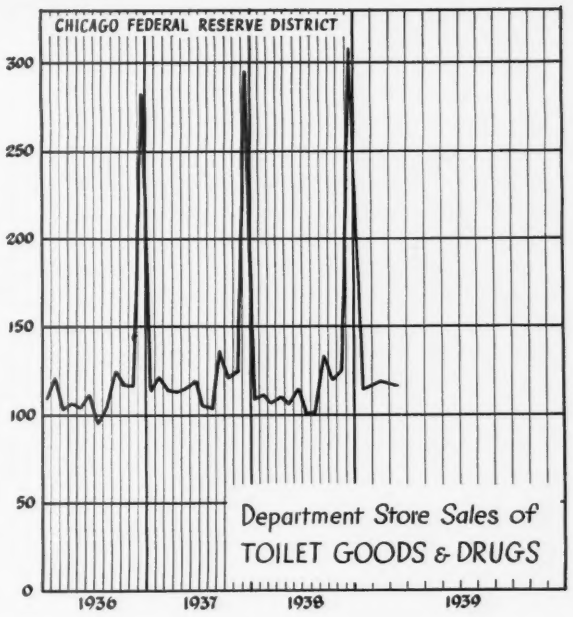
" 'Hell, we give our products a shot in the arm now and then,' they say, 'but we don't want to make dope addicts out of them.' But P&G finds that besides capitalizing on the cupidity of the buying public, a premium offer or contest gives its salesmen a good excuse for making frequent visits to retailers. Instead of making a routine call, they can burst into a store with a hot tip on a new big national contest."

While the company has about 140 soap brands and a total of 200 products, six of the former account for 66 per cent. of net sales and a much higher percentage of net profits. P&G White Naphtha laundry soap is the biggest tonnage seller, but Oxydol granulated soap is the biggest money maker.

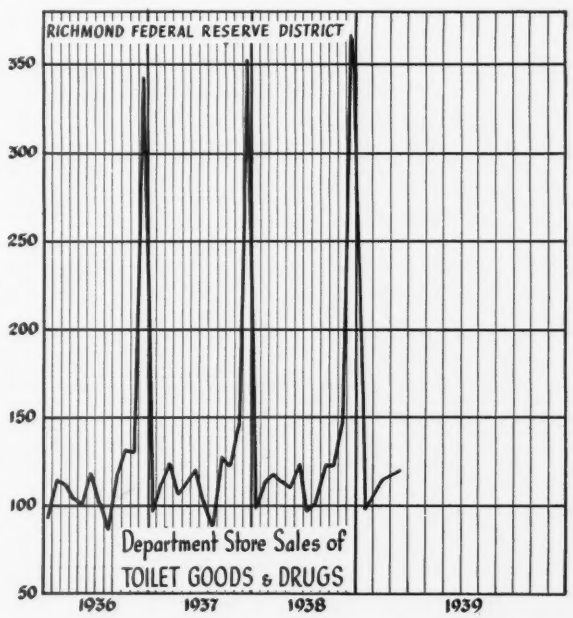
The Procter & Gamble Company is said to supply about 40 per cent. of the three billion pounds of soap consumed annually in the United States, while Lever Bros. accounts for about one-fifth and Colgate-Palmolive-Peet Company for one-fifth.

In a field where "it not merely pays to advertise, but it is death not to advertise, profits of the Procter & Gamble Company during the last decade have constituted an eloquent testimonial to the efficiency of the company. The valley was reached in 1932 with net of $8,918,000 and an all-time peak was established in 1937, with $26,800,000. Net sales have aggregated $1,630,000,000 since 1928, and dividends paid have totaled $136,000,000."

WOMEN'S REACTIONS TO ADVERTISING: Only 51 per cent. of women believe that advertising is truthful, according to a Ladies' Home Journal Survey. On the other hand, 82 per cent. reported that they have not in the past year bought a widely advertised product which did not turn out as advertised. And, 52 per cent. of those interviewed believe that widely advertised products cost more than those which are not advertised. City women apparently have a clearer understanding of how advertising works than their country cousins, 52 per cent. of the urban dwellers voting against the proposition that advertising raises the cost of the advertised product. When it came to the question, "Should advertising matter be left out of newspapers and magazines, out of radio programs?" an overwhelming majority voted in the negative. The figure was 96 per cent. for newspapers, 95 per cent. for magazines and 80 per cent. for radio, the magazine reports.



Sales of Toilet articles and drugs by department stores in the Chicago Federal Reserve District were 8.9 per cent. greater in March 1939 than in the same month of 1938. This corresponds to unadjusted index numbers of 116.7 for March 1939, 119.0 for February 1939, and 107.2 for March 1938.



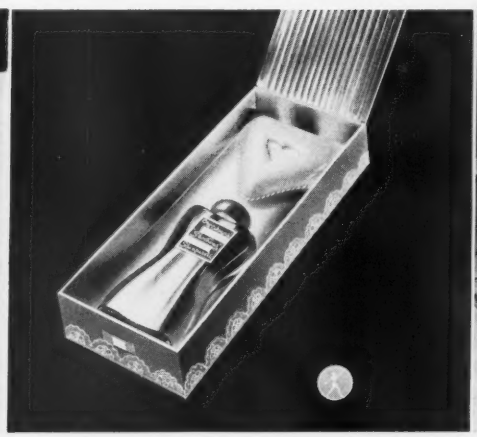
Sales of toilet articles and preparations by department stores in Baltimore increased by 6 per cent., in Washington decreased by 2 per cent., and averaged 2 per cent. greater in the Richmond Federal Reserve District in March 1939 than in March 1938. The unadjusted index numbers for the district were 120.0 for March 1939, 114.1 for February 1939, and 117.6 for March 1938.

HARRIET HUBBARD AYER

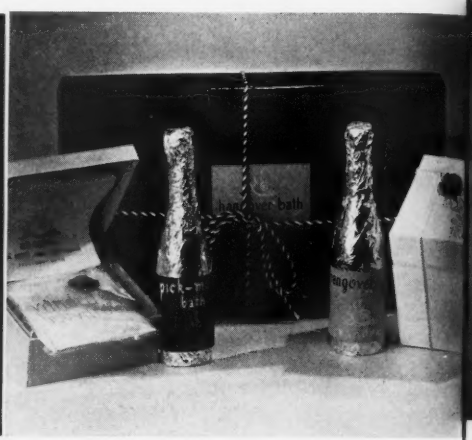
MARY DUNHILL

LENTHERIC

LUCIEN LELONG



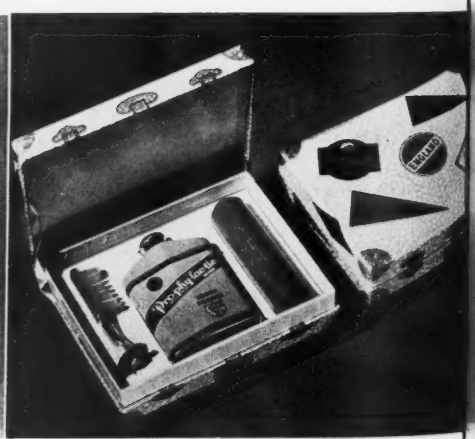
SCHIAPARELLI



XANDRA

MARTON FRERES

DORALDINA



PRO-PHY-LAC-TIC BRUSH CO.

DOROTHY GRAY

FABERGÉ

JORDEAU, INC.

HARRIET HUBBARD AYER

Harriet Hubbard Ayer offers a new edition of Pink Clover. This popular odor now appears in a series of decorative bottles and boxes spangled with pink clover leaves. The complete series includes Pink Clover perfume, Cologne, face powder, and bath luxuries—talcum sachet, Bathsheen, bath powder, talcum and soap.

MARY DUNHILL

Mary Dunhill's Amulet Cologne has the same oriental fragrance of Amulet perfume, in addition to the refreshing qualities of eau de Cologne. It is attractively bottled with gold label and cap.

LENTHERIC

Lentheric's "A Bientot" perfume was followed shortly after its introduction by "Bouquet Lentheric," and now by all the other allied accessories—bath oil, bath powder, bath powder bowl, bath crystals, soap, sachet powder and bags, sachet flower baskets, brilliantine, face and talcum powder. The packaging of the entire line is characterized in design by a starch-white background accented by the four-color script of "A Bientots."

DOROTHY GRAY

The new Dorothy Gray dusting powder packages are gay and feminine. Available in a choice of three floral odors—Golden Orchid which comes in a shimmering gold box; Jasmin Bouquet in an iridescent blue; Rose Geranium bouquet in a changeable rosy-orchid.

GEORGE L. CLAFLIN CO.

The George L. Claflin Co. has packaged its dry chemicals—Epsom Salt, Sodium Bicarbonate, Compound Powder of Senna, and Flaxseed Meal, in wide mouth, screw-cap glass jars supplied by the Owens-Illinois Glass Co.

LUCIEN LELONG

Lucien Lelong presents a new Penthouse Cologne package, entirely different in style and fragrances. This has Indiscret, Opening Night, and Mon Image. The Travel Pac has also been restyled and comes in Eau de Cologne, Glace, French Lavendar, Gardenia and Whisper, with a screw top to prevent leakage.

SCHIAPARELLI

Schiaparelli's Shocking bath duet consists of two luxurious bath accessories—soap and Cologne, packaged in a goldlined Shocking pink box.

XANDRA

To the Sea Moss Baths, Xandra added "Hangover Bath," the first of the year, and now comes a twin to Hangover—"Pick Me Up." Both of these are ammonia baths, one topped with violet and the other carnation fragrances.

FABERGÉ

Fabergé has created a gift package to delight week-end hostesses. A purse-size phial of Parfum Aphrodisia and a small flacon of matching Eau de Cologne Extraordinaire, in streamlined crystal containers with screwon, leakproof tops, set in a gilded gift box.

BARBARA GOULD

Barbara Gould's Rose Blush is a skin stimulant of a delicate pink tint in lotion form with an emulsified oil base. It brings a glow to the skin and may be used both night and morning.

MARTON FRERES

Marton bath oil miniatures contain six one-dram bottles, either uniform or in six different scents. Each bottle is sufficient for one or two baths. The package is primarily designed as a gift, or to be used by a hostess in a guest's bathroom.

DORALDINA

The new repackaged Doraldina line is now on the market. It consists of fourteen items. The jars are a bright, clear green with ivory caps. Representative items in the line are shown in the photograph.

PRO-PHY-LAC-TIC BRUSH CO.

The Pro-phy-lac-tic Brush Co. presents a gay new Bon Voyage tooth kit, containing a colorful travel kit tooth brush and a container of tooth powder. This attractive, compact package is well equipped to care for the traveler's tooth cleansing needs.

JORDEAU, INC.

A new diplatory has been created by Jordeau, Inc. for the elimination of superfluous hair. Jordeau has discontinued the use of the formula for its Zip Depilatory Cream and has substituted a new formula for the product—delightfully perfumed, white and smooth.

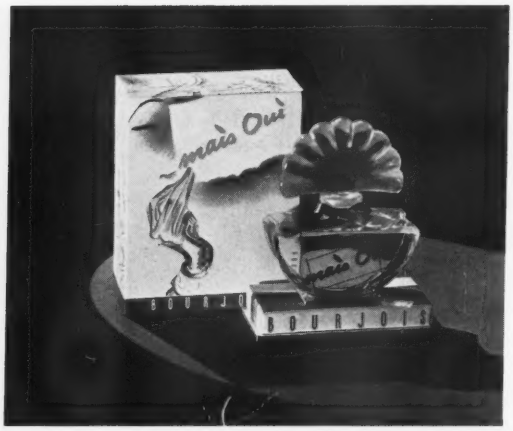
MASTIN PRODUCTS CO.

Mastin's "Eye-Firm" is an invisible cream, which helps to modify lines and wrinkles around the eyes. A thin film may also be used for a sheen around the eyes.

GEORGE L. CLAFLIN CO.

BARBARA GOULD

MASTIN PRODUCTS

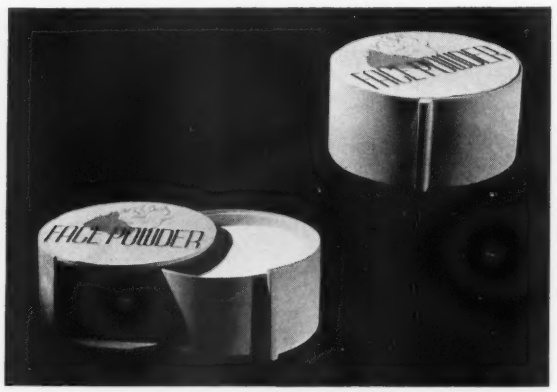


"MAIS OUI": Bourjois announces "Mais Oui," an effectively packaged perfume and six intriguing accessories. Mais Oui is a heady perfume with a sparkle. The bottle is handsome with a gleaming stopper, and a particularly gay, feminine color theme—white, with soft blue and mat cerise, has been used on the box. This color theme is used on all the Mais Oui boxes. The box which holds the perfume shows one sparkling, flirtatious eye of a lady who is holding up a card on which she has written "Mais Oui." The Mais Oui line besides the perfume includes Mais Oui Eau Parfumee, an eau de Cologne; talcum, in a glass container; face powder in a charming box of white and French blue with silver and magenta highlights, bath powder, packaged in similar fashion and with an over-all design of an amusing panorama of the powder in milady's boudoir; rouge, in a dainty moulded case, and lipstick, in a case of simulated gold, highlighted with French blue, in six shades.

ADD ELECTRIC SHAVING: As just another straw in the wind, you may have noticed that the Terminal Barber Shops, leading New York chain, has installed dry shavers in each of its 21 shops. The dry shave installation has been advertised by Terminal at the regular 25-cent price. Special instruction in dry shaving technique may also be obtained for 50 cents additional.

COSMETIC SETS FASHION: Cosmetic trends generally are chiefly guided by the fashion trend, so it is with much glee that we note an instance where cosmetics have actually inspired the fashion creators. Since women are so completely nail conscious these days, glove manufacturers have hit upon a new idea for gloves—well maybe it's new or maybe we are just going back to grandmother's day, but anyway, we now have a new fashion in gloves—the tipless glove which shows off a new manicure to good advantage, and the glove with tiny net finger tips to display nail enameled finger tips. The gloves achieve a Gay Nineties look and will tend to make women even more conscious of the necessity for well kept and gaily tipped finger nails, for while at the moment they are extremely high-priced and confined only to the better specialty stores, it is just a matter of time before they will be copied by the popular-price manufacturers and then will be within the reach of everyone.

DRUG ACT HANDBOOK: Added to the increasing number of those offering some type of service in connection with interpreting the Food, Drug and Cosmetic Act is the Container Corporation of America which has issued an annotated handbook of that Act. Copies may be obtained from the company gratis until the supply is exhausted.



SIDE-HINGE POWDER BOX: A new powder box which, it is claimed, banishes woman's annoyance over spilled face powder and makes nose powdering a tidy art has been designed by Zana Mott of Woodbridge, N. J., twenty-year-old student in the Cooper Union Art School.

Eliminating the trail of powder which rises in a cloud with the opening of the ordinary container and then settles over women's dresses or vanity tables, the box is adapted to economical commercial production, according to Paul Feeley, head of the Department of Industrial Design at Cooper Union, in whose class Miss Mott is a student.

Pointing out that spilled powder has long distressed women and necessitated elaborate precautions before opening a powder box, Miss Mott said that it took two months to complete her model, which is made of plywood and covered with heavy paper. According to her specifications, the average container would be made from cardboard.

The box consists of one circular shell which houses the powder and a second half shell which supports the cover and a base. The two are joined by a vertical hinge so that by a simple sliding motion to the right the box slips out from its cover. The two shells remain attached while the box is opened, an additional advantage if the box is held in the hand, since it leaves the right hand free to wield the powder puff.

ADMINISTRATIVE PROBLEMS

THE LEA BILL DESIGNED TO POSTPONE the effective date of the labeling provisions of the Food, Drug, and Cosmetic Act, passed the House with such rapidity as to amaze the industry. However, the reception which the Bill obtains in the Senate is something else again. Senator Bailey, of North Carolina, Chairman of the Senate Committee on Interstate Commerce, is said to have expressed the opinion that no postponement is necessary. However, he cannot very well snub Chairman Lea of the House Committee, whose Bill passed the House Committee without a dissenting vote.

But the real danger comes from the fact that the subject was reopened without the consent of Mr. Campbell, and in this opposition to postponement Mr. Campbell was backed up by his superior, Secretary of Agriculture Wallace who issued a statement opposing postponement. However, Mr. Campbell was called before a Congressional Committee and asked why he was making so many seizures, one or more of the legislators probably having Bromo-Seltzer and other similar preparations in mind. Mr. Campbell then suggested that his department be given the power to issue cease and desist orders against manufacturers or products after the manner of the Federal Trade Commission.

This opens an entirely new line of thought regarding enforcement of the new act. Under such a change in the law, the FDA would become a quasi-judicial body such as the FTC has always been. The FDA would then issue a cease and desist order against a product or its labeling and the manufacturer would have to appeal to the courts for relief from the order. Also the FDA would probably make use of the injunction method now used by the FTC and they would thereby completely stop the distribution of a product in interstate commerce while they were deciding whether or not a cease and desist order was to be issued. This would be equivalent to bringing back into being the weapon of multiple seizures which was eliminated from the new law only after a long and hard battle which consumed a large part of the time getting the law in final form for enactment. If anything like this is to follow the attempt at postponement, those who started any amendment of the law will be sorry.

WE CAN SEE NO VALID REASON for manufacturers who are ready with new labels taking advantage of any delay granted. We should think that manufacturers would be particularly anxious to get their newly labeled goods on the market as rapidly as possible so that these goods would be as widely distributed as possible when the law becomes effective.

We had a call recently from a man who was all excited because he had given an order for new cartons giving the quantity of phenobarbital and a warning, and then read that the postponement bill had passed the House. He thought he should cancel the order for the cartons. We asked him why he did not use them even if a postponement was granted, but he said he did not want to put that information on the law until required to do so. We told him he could cancel the order and then wait and see if the bill was enacted, but if it was not enacted he would be in a jam. Finally we told him to let the order stand for the new cartons, since he was going to use them eventually anyway, and then wait and rush an order for an additional supply of the old cartons if the bill was enacted.

WHILE A LARGE NUMBER OF MANUFACTURERS have everything in shipshape order for the new law, there are some who can see no possible chance of being ready by June 25. This is due mainly to a multiplicity of products, which with some drug manufacturers run over into the candy field. The changes are costing most manufacturers extremely large sums of money.

One ethical manufacturer had a chemist, a lawyer, and a doctor working on the labeling of their products locked up in a hotel room in New York. It was impossible for these men to work in the offices of the company due to the great concentration necessary in this work.

SALICYLATES
of Monsanto Quality

The effectiveness of these Salicylates has been proved through many years of satisfactory performance. Pharmaceutical manufacturers look to Monsanto with confidence to supply their Salicylates requirements.

AMMONIUM SALICYLATE U. S. P.

ASPIR GRAN

ASPIRIN (Acetyl Salicylic Acid U. S. P.)

ASPIRIN STARCH GRANULATIONS
10%, 16%, and 20%
Also pink and green 10%

CALCIUM SALICYLATE

LITHIUM SALICYLATE N. F.

MAGNESIUM SALICYLATE

METHYL SALICYLATE U. S. P.

POTASSIUM SALICYLATE

SALOL U. S. P.

SODIUM SALICYLATE U. S. P.

STRONTIUM SALICYLATE N. F.

MONSANTO CHEMICAL COMPANY
St. Louis, U. S. A.

New York · Chicago · Boston · Charlotte · Birmingham · Detroit
Los Angeles · San Francisco · Montreal

ONE SERIOUS TROUBLE WITH OPENING UP A LAW for revision is that many in the industry believe the event is a Roman holiday when all the things which they find they do not like in the law will be changed. Under these circumstances, the legislative committees are deluged with requests to change this or change that section of the law because the complainants believe that they would be so much better off if just the little part of the law in which they are particularly interested were changed. Such people had best save time and trouble. The provisions of the law were discussed in hearings and conferences for very close to five years before the law was enacted. One or two slight errors crept into the final draft and these are all that should be changed by an amendment. Certainly no amendment to the law is going to lessen the effectiveness of the law. The provisions of the law are all in there for good purposes and Congress will have to see that certain provisions do not work out properly after trial before they will be conducive to change .

WHILE MOST MANUFACTURERS have gone ahead and tried to work out the new labeling requirements to the best of their ability and to the fullest extent of the law, some of the manufacturers have been hesitating because they believe they can get away with less than necessary in the way of changes. If these people would only come to the conclusion that conditions under the new law are going to be the same for all, they would eliminate much worry and could devote much more time to building up their businesses in a constructive manner. The provisions of the law and regulations are there for all to read, and if these provisions are going to make it difficult for one to market his goods, it is going to make it just as difficult for all—depending to some extent upon the type of products. Conditions of marketing products under the new are going to be quite different but just as much goods will probably be sold. Those who will forge ahead under the changed conditions will be those who realize that a change has come and take advantage of the situation by changing their methods as rapidly as possible.

THERE ARE SOME MISUNDERSTANDINGS as to just what the Lea Bill to amend the Food, Drug and Cosmetic Act covers, some people thinking

This is the first and last of a series of simplified charts developed in cooperation with the Food and Drug Administration, the counsels of the leading trade associations, —not forgetting the many arduous hours spent by our own legal staff—to clarify the labeling provisions of the Food, Drug, and Cosmetic Act.

Editor's Note: **And how are you doing, Mr. Campbell?**

that some parts of the labeling requirements are definitely eliminated from the law altogether. This is not so, they are only postponed.

The bill postpones until January 1, 1940, section 501 a (4) and 601 e, which sections require drugs and cosmetics to contain certified colors. Furthermore, with respect to drugs the bill postpones until January 1, 1940, sections 502 b, d, e, f, g, and h, which are the labeling requirements of the new law which necessitate any label or labeling information than is different from the old law. With respect to labeling of cosmetics, the bill postpones until January 1, 1940, section 602 b, which requires that name and address of manufacturer, packer, or distributor, and the quantity of the contents appear on the label.

The FDA is granted additional power to postpone the effective date of these labeling requirements "to the extent that the operation of such provisions would be unduly burdensome by reason of compliance therewith, but only insofar as such postponement will not prevent the public interest being adequately served." This additional postponement power granted to the FDA in individual cases cannot be extended in any case beyond July 1, 1940, and cannot be extended in instances than those in which the labels or containers to be used up were manufactured not later than February 1, 1939.

Section 502 d, which requires that the quantity and percentage of narcotics and other habit-forming drugs be given on the label, is amended so that it is only necessary to either the quantity or percentage and not both. The bill does not change the similar requirement that both quantity and percentage of any kind of alcohol be given, although Enforcement Chief Campbell has regulated that the percentage of alcohol alone will be sufficient. The postponement of the requirement that products contain certified colors would not postpone the certification of colors from June 25 on. Therefore, manufacturers would have six months in which to obtain certified colors from the color manufacturers and incorporate them in their products. Now that the final regulations for the certification of colors have been issued, there would be no difficulty in complying with this part of the law which constituted the glaring defect in the law as it was enacted on June 25, 1938.

THE DRUG MANUFACTURING ASSOCIATIONS which refused to press for enactment of the Lea amendment, but who took a strictly neutral attitude, fell in line with those favoring enactment of the amendment after the bill had passed the House. However, these associations refused to get excited about the amendment and remained more or less in a passive state. In other words, while they joined in the group who advocated passage of the bill, they did not take off their coats and roll up their sleeves in an effort to get the bill enacted.

WE THINK THAT THE FDA HAS WORKED out the classification of certified colors quite well. FD&C colors are permitted in foods, drugs, and cosmetics; D&C colors can be used in drugs and cosmetics, but not in foods; and EXT D&C colors can be used only in externally applied drugs and cosmetics. Since externally applied drugs and cosmetics do not include products which are applied to the lips or any part of the body covered by the mucous membrane, EXT D&C colors cannot be used on lipsticks. Lipstick colors therefore, will have to be selected from FD&C colors or D&C colors.

Eighty-two colors are included in the regulations for certification, and mixtures as well as straight colors are provided for. Also lakes made from the certified colors can be certified. No coal-tar colors are permitted to be used in preparations applied to the eyelashes, eyebrows, or anywhere in the region of the eye—a very excellent regulation.

WITH ALL ITS ACTIVITY ON ADVERTISING control under the Wheeler-Lea Act, the FTC every so often shows that it has not forgotten the Robinson-Patman Act. Just last month they cited the Lambert Company under this act asserting that the system of rebates used by Lambert for "alleged advertising, selling or warehouse facilities," violates Section 2 d of the act, which is the part of the act that requires that all rebates for services be granted to all customers on "proportionately equal terms." The Lambert Company states that the methods have been used by the company for seven years and are acceptable to the customers of Lambert whom the law is designed to protect.

One interesting phase of the comparatively few citations now being issued by the FTC under the Robinson-Patman might be that manufacturers are generally conforming with the act. Such a condition speaks well for the Commission and for the manufacturers in this industry.

WITH DR. DURRETT SPEAKING at the recent convention of the American Drug Manufacturers' Association, it looks as though it is time that those in this industry had better expect talks from officials of the FDA at forthcoming conventions as was the case some years back when Dr. Durrett was doing things with the old Food and Drugs Act that just about turned the industry upside down.

We know that Dr. Durrett is an extremely capable but cagey gentleman who refuses to be trapped with questions from the floor. He just continues to smile and answer trick questions in a way that satisfies nobody. However, we know that Dr. Durrett can be very enlightening regarding most aspects of the bill, although his opinions as to what cannot be done are sometimes rather difficult to swallow.

LEGAL ANGLES

By S. L. MAYHAM

THE LAW STANDS

That is the answer to the question which I have so frequently been asked in recent weeks regarding those sections of the new Food, Drug & Cosmetic Act on which the Secretary has not issued regulations. The Secretary is not compelled to issue regulations for the enforcement of any particular provisions. Because he has chosen not to do so on several paragraphs does not mean that his nice young men will ignore these provisions or that enforcement of these paragraphs will not be as vigorous as may seem necessary. In fact in some instances, it may mean that enforcement is going to be even more vigorous than in cases where the Secretary has restricted enforcement operations by means of a limiting regulation.

DECEPTIVE PACKAGES

A case in point on the paragraph above is that provision of the law which declares a product to be misbranded if its packaging is deceptive or if it is slack filled. Reports reaching this department are that each case of "deceptive" packaging is being handled on its own merits and that the views of the Department are very stringent on the question of what is deceptive and what is not. In the case of one manufacturer who for years has packaged his tubes of tooth paste in cartons which are certainly not oversized for work on an automatic machine, the Department has indicated displeasure and has finally approved a considerably smaller carton which, while it can be filled automatically, makes that operation very difficult indeed.

In the case of bottles, best opinion is that a good many now on the market in the cosmetic trade and some few in the drug trade are likely to be held deceptive. The fact that the label may clearly state the net contents as the law requires has no bearing upon a package which the Department may feel to be misleading as to size, shape, or fill. In other words an ounce jar of cream in a package which looks like a two ounce jar is still misbranded even if the net contents is stated in bold type, readable at a considerable distance. The law does not assume that the consumer knows how big an ounce should look.

It is good advice to scrutinize all packages now existing in any line and to be extremely careful that none of them could possibly deceive the consumer as to the amount of its contents. The Department's attitude is not likely to be soft in this respect.

POSTPONEMENT

Regardless of whether Congress finally acts to postpone the labeling and color provisions of the law, the industry seems unduly alarmed about the situation. Secretary Wallace has repeatedly assured the trade that arbitrary and unfair action will not be taken against goods on which complete compliance has been impossible due to the time required for changes. Goods on the shelves of retailers before effective date of the law are not to be disturbed. Certification of colors will be required only after supplies of certified colors are available. Every effort is being made to work through a difficult transition period with a minimum of harm to the industry and with the best possible protection to the consuming public. Hence it would seem that some of the extremely bitter comments heard in the cosmetic industry particularly are hardly justifiable. Many things could have been done by manufacturers before June 25. Those that could have been done should have been. No manufacturer faced with an insoluble problem is going to be persecuted for his inability to comply fully. I still feel that the transition period would be made more difficult by postponement.

DEMONSTRATORS AND RULES

A long time ago, a rather acrimonious conference was held by the cosmetic industry with the Federal Trade Commission and out of that came some trade practice rules, which were submitted in accordance with the law to interested parties. Since that time nothing has been heard of them. They languish until the Commission chooses to issue them in the original or an amended form. Many things may have delayed them. The Robinson-Patman Act was at first thought to be responsible. The Wheeler-Lea Act has been blamed. Trial of cases against cosmetic companies under these acts, it was believed, held up the rules until adjudication of some of the points at issue. In any event the industry is still without rules.

Now comes a Trade Commission complaint against a cosmetic house which seemingly discloses the attitude of the Commission on demonstrators. As I read the complaint, the Commission thinks all demonstrators are bad and would stop their use. It says that they may lead to misrepresentation of competitors' products, now against the law clearly and definitely, and that unscrupulous dealers may use them as instruments for fraud and deception, which may or may not be true, but, if true, is again illegal. More specifically the complaint says that hidden demonstrators, although it does not call them that, may mislead the buying public. With this last point, there will be little disagreement although a fair case might be made out on the other two questions.

There has been no cease and desist order on demonstrators, hidden or open as yet, but it is clear that the attitude of the Commission is certainly against the former and from this citation may be against the latter. Trial of these cases is likely to last a long time. Trade Commission cases are never pushed to a too rapid conclusion. I hope both sides of the picture will be adequately and forcefully presented and that there may finally be a conclusion legally reached on this demonstrator question. It has vexed the industry ever since I can remember.

AMMONIATED MERCURY

The industry has known for a long time through researches of its own members that ammoniated mercury as bleaching agent might very easily be harmful and was almost sure to be on certain types of skins, unfortunately those on which it would probably be used most frequently. Now the Food & Drug Administration has seized some quantities of preparations containing this drug, thus serving notice on manufacturers of its own opinion of the matter. The industry is not likely to be harmed if all such preparations are banned although such action would hurt one or two fairly prominent houses.

Items of this type are certainly drugs under the meaning of the act. Perhaps they may still be sold as drugs if labelled according to the drug provisions and bearing an adequate warning of liability of harm. What such labelling would do to their sales is quite another matter, but the public certainly should be on its guard in the use of ammoniated mercury bleaches and, under the law, the manufacturer is responsible for putting the consumer on her guard.

WHO COMPETES WITH WHOM?

Classification of customers is permitted within certain limits by the Robinson-Patman Act. Just how far such classification absolves the manufacturer from offering the same goods and services to all is a question likely to be settled by a Trade Commission case against a prominent house. The house in question had been providing a special package of a certain type for the chain store trade and had not been selling that particular package in other channels. The Commission thereupon cited the manufacturer for violation of the Robinson-Patman Act, charging that refusal to sell this package to any retailer engaged competitively with the chains was illegal discrimination. The smaller and cheaper chain store packages, the Commission holds have a tendency to cause competitive advantage to this class of customers. Involved are the questions of the existence of competition, which seems fairly obvious, and the right to classify customers, which is a very greatly disputed point. Even grating that right, does the law allow special types of merchandise for sole distribution in any one type of outlet? The question is important and it is to be hoped that the decision will not be too long delayed.

FACE POWDER LABELS

The Toilet Goods' Association has advised its members that required information on face powder boxes may be placed upon the bottom label instead of on the front or top, as the regulations seem to require, with supplementary repeated information on the drum or cellophane window at which the consumer looks when selecting a shade of powder. This may be legal in view of the fact that face powder boxes have been bottom labelled for many years and the consumer is presumably accustomed to finding the label so placed. No one is likely to make an issue of it with the Department, but, if someone should, it is quite possible that consistency would require the enforcement officials to be somewhat more strict in their requirements as to the position of these labels. The regulations clearly require that the legal parts of the label be placed so that they are conspicuous and easily read under customary conditions of sale. This may not in all cases mean as they are placed upon the shelves or in the cases of the retailer. It doesn't mean, however, that the information may be hidden on bottom labels if it is hard to find there, or in the case of products on which it is not customary to use bottom labels. Nor does it even mean that one house, which may have used bottom labels on a whole host of products may continue to do so because competitors are labeling face powder in that fashion. No one would get away with that and it is quite possible that if any house pleaded the face powder situation as an excuse for general bottom labeling, the Department would take the occasion to force front or top labeling of powder boxes.

INFORMATIVE LABELING

Complaints throughout the drug trade against the provisions of the law regarding formula labeling and cautions to consumers have been quite general. Meanwhile the paint and varnish trade, not required by law to formula label its products is considering printing formulas on its packages. Delancy Kountze, chairman of a special labeling committee, urged that step upon members of the industry at a recent meeting. Significant for the drug and cosmetic manufacturer is Mr. Kountze's reason for asking his colleagues to adopt this profound change in historic paint trade methods. He said that consumers were becoming better educated and were beginning to demand what was in the products they purchased. If he found that true in paints, what is the case in much more intimate products? No one long stood up against the march of progress.

ALCOHOL BILLS

It is easy to be lulled into security when a stout watch dog is at the door to guard against intruders. So the alcohol producing and consuming industries are likely to feel that all is well so long as the Industrial Alcohol Institute and the more recently formed consumers' group are functioning so smoothly as they seem to be at present. However, certain states have bills pending which may be disastrous if not amended. Connecticut has one and so has North Carolina. Both of these bills would tax alcohol without the safeguarding clause exempting clearly and definitely spirits used in the arts and in medicine. There is no danger of these watch dogs going to sleep. They are much to alert and vigorous for that. But they might conceivably be overpowered without the assistance of the manufacturer and consumer whose interests they are protecting. It is not enough to let the twin institutes handle all the work. When these bills come up, it is a good idea to personally assume some of the responsibility for their being properly worded through adoption of the standard protective clause used in practically every state enactment.

"NOURISHING" COSMETICS

Dunhill has stipulated that its cosmetics do not "nourish" and has agreed to stop saying that they do. There have been numerous other stipulations in the past along the same lines. At the same time, a great deal of scientific work has been done to prove that certain substances when rubbed into the skin do actually have the effects of foods taken internally. How far the industry should go in advancing these facts and how far it should continue to stipulate that nothing rubbed on the skin can have any internal effect is not for me to say. I can foresee the time, however, unless some effort is made to advance the scientific basis for cosmetic creams of the so-called "nourishing" type, when these products will just cease to exist. That is quite all right if all that has been claimed for them is "bunk" designed to mislead the purchaser. However, I wonder how much is "bunk" and how much could really be sustained by the work done here and abroad on the absorbability of products by and through the skin. It proof can be adduced, sufficient to convince a court, the industry is certainly being very lax and kicking away a very lucrative market, when it runs to cover every time the Trade Commission asks for a stipulation.

TOLERANCES FOR HEADACHE REMEDIES

The Food & Drug Administration has been bold enough to establish informal tolerances for acetanilid and bromides in headache remedies. This combination of ingredients is safe from seizure if no more than 2½ grains of acetanilid and 7½ grains of bromides are contained in each dose and the consumer is warned against taking more than two doses in 24 hours. This is a great deal bolder and more specific than the Bureau usually is. I recall the long dispute over arsenic and lead tolerances in relation to the spray residue problem on fruit which dragged on for years without establishment of tolerances. (Perhaps they haven't been established even now.) Rightly or wrongly manufacturers are now placed on warning and Mr. Campbell has gone part way out on the limb. What the manufacturers will do now remains to be seen, but I think one or two of them may have possession of reasonably sharp saws to use between the Administrator and the legal tree to which his limb is attached.

F.D.A. and F.T.C. Activities

Hudnut Signs Stipulation

Richard Hudnut has entered into a stipulation to cease misleading representations in advertising its products

Hudnut agreed to discontinue advertising that any of its products will of itself affect the shape of the facial contour or will prevent or eliminate wrinkles and signs of age, regardless of cause; or that any of the respondent's products is a skin food or that use of any of these preparations will "banish" fatigue.

The respondent also agreed to cease representing that application of principles involved in its recommended Beauty Angle Treatment will restore vitality to the skin, eliminate sallowness, bumps or blotches, or constitutes the natural way to achieve any given results, or is the only treatment by which the circulation is stimulated naturally.

The respondent corporation stipulated that it will cease using, unless properly qualified accordingly, the trade names DuBarry Tissue Cream, DuBarry Contour Cream, DuBarry Moulding Oil, and DuBarry Special Preparation for Blackheads.

Just a Hair Dye

The F. T. C. has ordered J. Palazzolo, 436 East 14th St., New York, to cease representing that a preparation advertised as "Otello Water" and "L'Acqua Otello" is other than a dye; that its use will restore natural color and vitality to hair, cure dandruff, cause new growth of hair, or prevent falling of hair.

Not French

Trading as Francaise Perfumerie et Cie, Benjamin J. Rosenthal, Baltimore, agrees to discontinue use of the words "Francaise Perfumerie et Cie" as a trade name under which to sell his preparations, or the words "Francaise" or "French," implying that the preparations he sells are of French origin. He will cease using the words "Imported Perfumes" as descriptive of perfumes not imported as finished products; the phrase "reproductions of fine imported perfumes" as descriptive of perfumes that were not such reproductions, and the words "Paris" or "London," implying that he has places of business in those cities.

Dermetics Modifies Claims

Under a stipulation with the F. T. C. Dermetics, Inc., Seattle, Wash., will discontinue representing that one of its preparations will awaken vasomotor or sensory nerves, or that such nerves are inactive in most people; that use of the products will make one young or assure natural functions of the nerves, cells, pores or blood stream; that competing cleansing creams cause pores to become clogged or impair the function of the skin; that the respondent's powder is moisture proof and prevents caking or streaking, or that use of any products sold by the respondent will cause the hair to grow thicker, darker, more abundant or assure lustrous, luxuriant hair or hair with a natural sheen.

Cuticura Claims Modified

Potter Drug and Chemical Corp., Malden, Mass., under a supplemental stipulation will discontinue representing that Cuticura Soap and Cuticura Ointment, when used separately or in conjunction, will help promote lustrous hair growth quickly; and aid in normalizing oily skin, correcting dry skin, refining skin texture, and in imparting new firmness to the skin; that products will remove or aid in clearing blemishes, unless this representation is limited to blemishes from external causes. Claim Cuticura Soap cleanses the pores deeply or thoroughly or eliminates coarse pores, will also be discontinued.

Curative Claims To Stop

C. Harrison Lund, trading as Lund's Grape Juice Company, and Lund's Health Institute, 332 East 6th St., Erie, Pa., has entered into a stipulation with the F. T. C. to cease advertising that his products have any curative effects on diseases such as stomach, liver, kidney or intestinal troubles, and will desist from use of "Health Institute" or any words implying that his business is an institution equipped for the restoration of health, and from representing that the so-called "Consulting Dietist" correspondence course offered by him is of such efficiency that all persons who take it will become qualified to be properly designated "Consulting Dietist."

Mother Nature Salts Stopped

Soap Lake Products Corp., Seattle, Wash., distributors of packaged mineral salts, ingredients of which are taken from Soap Lake in the State of Washington, is ordered to cease misrepresentation of the efficacy of the products in curing numerous ailments and diseases.

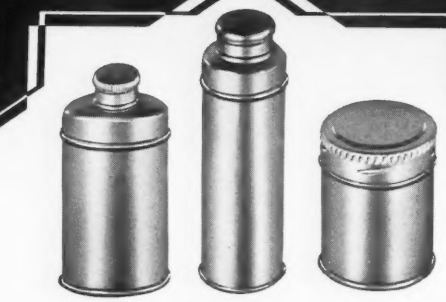
Respondent has advertised "Mother Nature Soap Lake Salts," "Mother Nature Soap Lake Seltzer" and "Mother Nature Soap Lake Spirit" as possessing broad healing qualities. Among advertisements of the respondent quoted in the findings of the Commission are: "ALMOST UNBELIEVABLE—BUT TRUE! The fame of Soap Lake has become nationwide. More than 30,000 visitors last summer! They came with aches and pains—rheumatism, neuritis, arthritis * * * with skin irritations—eczema, itch, psoriasis, athlete's foot, poison oak, poison ivy, gangrene and lingering infections; with stomach, gall, intestine, kidney, bladder and other functional disorders—and left happy." * * * "No longer need you journey far and expensively to prove the virtue of Soap Lake minerals. They are now easily and inexpensively available to you through your druggist *.* * from Nature's own laboratory."

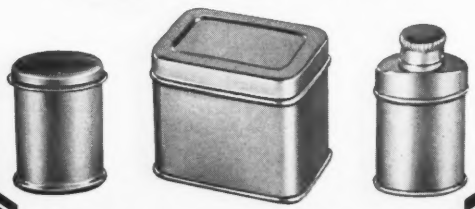
In truth, the findings state, use of the products alone, externally or internally, will not prevent or cure, and are not beneficial in the treatment of; any of the diseases or ailments named or any other disease, affliction or ailment which may be present in the human body, as represented in the respondent's broadcast and advertising literature. Under certain conditions use of the respondent's products, the findings state, are distinctly harmful.

Analysis has been made of the natural water of Soap Lake and also of the respondent's product, "Mother Nature Soap Lake Salts." The respondent's "Salts" are the unadulterated residue after evaporation is complete, and its "Spirit" the liquid concentrate bottled before evaporation is complete. Its "Seltzer" is 60 per cent. "Salts" and 40 per cent. citrate and tartaric acid salts.

"Mother Nature Soap Lake Salts" contain sodium carbonate 53 per cent., and sodium sulphate 21 per cent. Over 24 per cent. is potassium and sodium chloride, with a small percentage of calcium car-

Samplers





Product sampling has many merits and Continental has been called upon time and time again to produce the exact package in miniature for numerous manufacturers.

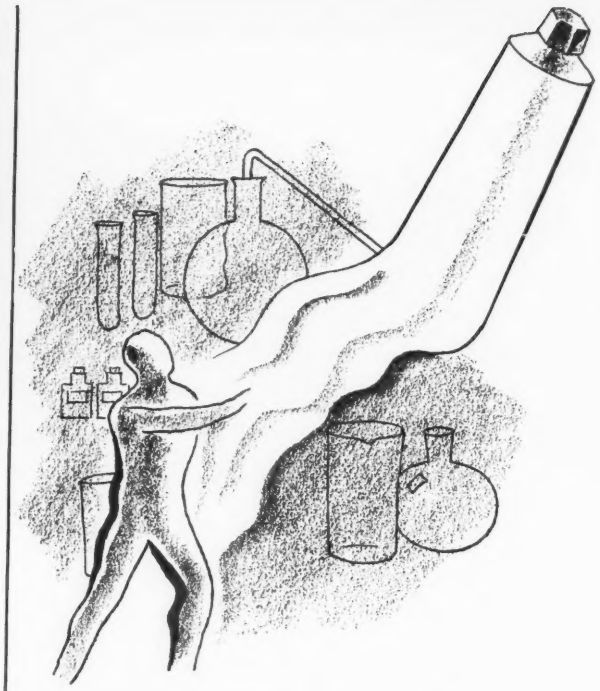
Shown here are a few examples of containers which perform their function inexpensively, creating a lasting impression of your package and product.

When your plans call for sampling, call for a Continental representative.

C

CONTINENTAL CAN COMPANY

New York · Chicago · San Francisco · Montreal · Toronto · Havana



CREATION IN

RIGID CELLULOSE

LUSTEROID

Creates Packages that Create Sales

LUSTEROID'S creative service designs packages that prove themselves on the sales firing-line, over the counter, in sampling drives. LUSTEROID is colorful, attractive in any hue you wish, transparent or opaque (to display or enhance your product).

LUSTEROID
saves on

SHIPPING —because it is 75% (approximately) lighter than glass.

PACKING —requires no wadding or filling.

BREAKAGE —because it is unbreakable.

LABELLING—because multicolor labelling is an integral part of its manufacture.

for packaging and sampling

DRUGS—COSMETICS—SMALL OBJECTS

A note or 'phone call will bring an answer to your packaging problem.

LUSTEROID CONTAINER CO., INC.

Formerly Lusteroid Division of the Sillcocks-Miller Company

SOUTH ORANGE, NEW JERSEY

bonate and negligible traces of silica, phosphorus, iron, aluminum, magnesium, iodine and lithium.

The respondent is ordered to cease and desist from representing that its products will cure eczema or similar skin diseases of systemic origin, or have any beneficial effect other than temporarily relieving itching and discomfort incidental to such diseases, or will cure athlete's foot, scalp sores, poison oak or poison ivy, pyorrhea, ulcers of the stomach, or that, when taken either internally or externally, they will prevent or cure rheumatism, neuritis, arthritis, lumbago, gangrene or Buerger's Disease, or, when applied externally, will have any beneficial effect other than temporary relief of pain and congestion of the afflicted parts.

Kirk's Tablet Claims

Lou Sterling and Walter Fehr Gardner, trading as Kirk Medicine Co., Hollywood, distributors of medicinal preparations designated "Kirk's Tablets," "Kirk's Pancreatin Compound Tablets," and "Kirk's Tablets Pancreatin Compound," are charged with misrepresentations of the effectiveness of their compounds in ailments of the digestive system.

Among statements are "The alkaline content of Kirk's Tablets aid nature in neutralizing and eliminating the acid accumulated in the digestive system." . . . "Do you have that headachy, listless, worn out feeling, back aches, upset stomach and no appetite—* * * acid indigestion. The accumulation of bacteria in the digestive system is the answer in a great many cases, as is attested in the thousands of letters we have received from users of Kirk's Tablets, who have found almost instant relief from their use."

The complaint charges that the tablets contain no alkalizing substance, would not be a cure or remedy the ailments named, and that representations that thousands of users have attested to the beneficial results secured from the use of the tablets is untrue.

Does Not Cure Scalp

Trading as Cuban Cosmetic Company, Alexander C. Brent, Jr., Chicago, in the sale of "Four-in-One Cuban Combination Hair Treatment," will desist from implying that his product, when locally applied to the scalp, will cause hair to grow or stop or correct falling hair or dandruff, or will stop eczema, tetter, ringworm, or any other fungus infection.

Breatheasy Claims Cited

Misleading representations in sale of "Breatheasy", advertised for bronchitis and other diseases, are alleged in a complaint issued by the F. T. C. against Pascal Company, Inc., Seattle, Wash.

Advertising literature is alleged to have stated that "Breatheasy" and the "Breatheasy Treatment" constitute a cure for chronic bronchitis, heart disease, cardiac distress, gastric ulcers, serum rashes, hives and other skin diseases, and inflammation of the nose, throat, tonsils, larynx and lungs, and neuralgia and neuritis. "Breatheasy" and the treatment are alleged not to be a cure for the diseases mentioned.

Complaint also cites false advertisements failing to reveal that use of its preparation under the conditions prescribed or under customary conditions may in some cases be injurious to health. Complaint alleges that presence of epinephrine would be definitely harmful to persons suffering from high blood pressure, toxic goiter, diabetes or heart disease.

Comstock To Cease Claims

W. H. Comstock Company, Ltd., whose principal place of business is Brockville, Ontario, with a branch in Morristown, N. Y., has been ordered to cease representing that Comstock's Dead Shot Worm Pellets are unfailing in treatment of worm infection and that Comstock's N and B Liniment has a therapeutic value in rheumatism, lumbago or neuralgia, chest colds or muscular pains of the human body other than as a counter-irritant for muscular pains due to minor conditions, such as excessive exercise or fatigue.

Vi-Donna Claims Changed

Biovegetin Products, Inc., trading as V. M. Products, Chicago, agrees to desist from advertising that scientists agree that a few Vi-Donna Capsules are sufficient to supply the body's need for Vitamin E; that the product will prevent sterility and incapacity for reproduction, and, that it is manufactured by the respondent.

Just a Laxative

Shirley L. DeArmond, trading as B. & N. Remedy Co., Knoxville, Tenn., agrees to discontinue advertising B. & N. Tonic as a competent treatment for dizzy spells, stomach disorders, nervous dyspepsia and other ailments and that the product is a tonic. The respondent admitted that his preparation is almost wholly a laxative and cannot be accurately described as a tonic.

Changes Names and Claims

Walter C. LaBerge, trading as Health and Strength Club, San Francisco, will cease representing or implying that mineral salts and vitamins are usually lacking in a majority of diets, or that his "Body Building Food" will supply the deficiency; that his "Laxative Food" is competent as a treatment for constipation; that his "Glandular Food" increases vigor, and that "Formula 116" is a competent treatment for eczema and contains "Vitamin F." LaBerge agreed to cease using the terms "Body Building," "Glandular" and "Laxative" as parts of the trade names of his products.

Freezone Claims Cited

Wyeth Chemical Company, Jersey City, distributor of "Freezone" for removing corns and callouses, has been served by the F. T. C. with a complaint alleging misrepresentation in the sale of its product.

Company is alleged to have represented that use of its preparation will cure corns and callouses and prevents formation and recurrence thereof, and will promptly stop the pain caused by corns and prevent its recurrence.

These representations are alleged to be false, misleading and untrue. The complaint charges that the preparation will not accomplish the results claimed, although it may have an analgesic effect and mitigate pain caused by corns.

Company is alleged to have represented that corns have roots, and that its preparation will remove such roots, will deaden pain caused by corns and prevent its recurrence, and that the entire corn can be removed by use of the fingers through one application of the preparation.

The complaint charges that in fact corns do not have roots, and that consequently the preparation will not remove roots. The complaint points out that while "Freezone" may have an analgesic effect and mitigate the pain, it will not deaden it and prevent recurrence. Neither can the entire corn be removed by use of the fingers through one application of Freezone, as it is necessary to make repeated applications and remove the cornified layers gradually by peeling off the tissue dissolved after each application of the preparation, according to the complaint.

Danson Formula Cited

Dan M. Thompson, doing business as Danson Laboratories and Thompson Laboratories, 32 North State Street, Chicago, is charged with misrepresentation in advertisements of "Danson Formula," an alleged cure for alcoholism. Complaint says respondent has represented that he conducts a laboratory and that the Danson Formula is a competent and effective treatment for alcoholism, these representations being alleged to be false and misleading.

Rheumatic Arthritis Treatment

Misleading representations in violation of the Federal Trade Commission Act are alleged in a complaint issued by the Commission against H. P. Clearwater, 145 Water St., Hallowell, Maine, distributor of "Rheumatic Arthritis Treatment." Clearwater is alleged to have represented that his product is an adequate treatment for and will cure arthritis, rheumatism, sciatica and lumbago, and in all cases relieve the pain. The complaint alleges that it is not such a treatment or cure, and that its effect is limited to that of a laxative and tonic and to relief from pain equivalent to that afforded by aspirin.

Dress Up Your DEODORANT PACKAGE

THIS unretouched photograph shows clearly the added display value our No. 2800 black rod sponge applicator gives to a package. This black rod stands out in the liquid making the applicator more noticeable, thereby giving more sales appeal to your package.

The bottle is our No. 7220 Perfection Design—a square oblong shape—available in 1 and 2 oz. sizes. The applicator can also be obtained with a glass rod (No. 2700) and the same black plastic cap, screw thread and finest rubber sponge. Either applicator can be supplied in a proper rod length to fit up to and including 4 oz. packages.

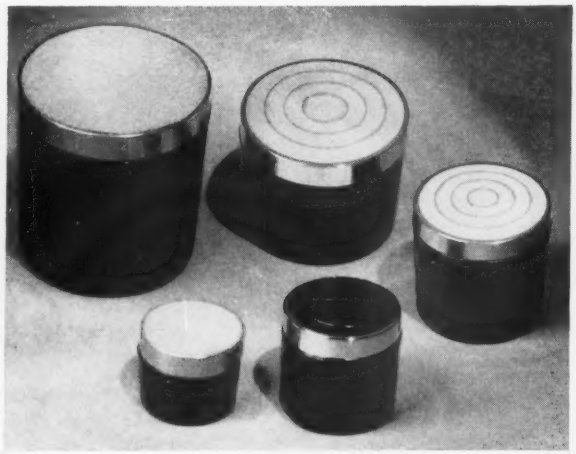
The summer deodorant season will soon be here, so you'll want samples and prices immediately! Write today!

ATLANTA, GA. Warren M. Curry 2895 Peachtree St.

NEW YORK, N. Y. L. A. Barber 1123 Broadway Room 301

ST. LOUIS, MO. Woodson Barnhart 200 So. Commercial Street

GLASS PRODUCTS CO.
GLASSWARE
VINELAND • NEW JERSEY



Lustrous BLACK OPAL JARS

WITH COLORED TWO PIECE CAPS

A higher priced container and closure of distinction for the better brands.

Write or wire today for samples and packaging suggestions.

W. BRAUN COMPANY
2441 W. 14th ST. CHICAGO, ILL.

Molded Caps of Distinction

- Beautify Your Product!
- Increase Sales Appeal!

by using

TERKELSEN HI-LUSTRE MOLDED CAP

Sizes available
10–13–15–18–20–22–24–28 mm
Short . . . Medium . . . Long

Any type of liner inserted

Let us quote on your requirements

Terkelsen Machine Company
320 A Street Boston, Mass.

Primrose House

A New York cosmetics manufacturer, Primrose House, Inc., has been served by the Federal Trade Commission with an amended and supplemental complaint alleging violation of both the Robinson-Patman and Federal Trade Commission Acts.

It is alleged that in the sale of its products to retail dealers the respondent furnishes to some but not all of its purchasers the services and facilities of special demonstrators installed in the purchasers' places of business to display, demonstrate and sell cosmetics.

The amended complaint points out that personnel furnished to merchants by the respondent are able to stress the merits of the respondent's products as against competing preparations and that they depend solely for continuance in employment upon adequate sales of the respondent's products. It is alleged that buyers relying on the expert advice of the demonstrators are unaware that they are employed not by the merchants in whose stores they appear but by the respondent cosmetic company.

In furnishing the demonstrators the respondent is alleged to violate Section 2 (e) of the Robinson-Patman Act which prohibits the furnishing of services or facilities connected with the sale of a commodity purchased, upon terms not granted to all purchasers on proportionally equal terms. The practice is also alleged to violate Section 5 of the Federal Trade Commission Act forbidding unfair competition and unfair and deceptive acts and practices in commerce.

The original complaint limited the allegations to certain violations of the Robinson-Patman Act.

The amended complaint also alleges that, in violation of the Robinson-Patman Act, the respondent furnishes to some but not all of its purchasers services and facilities included in promotional selling schemes known as "Give-away" promotions and "20 per cent. promotions."

The "Give-away promotions" are alleged to involve the consignment to selected purchasers of commodities to be given away in the sale by the purchasers of other of the respondent's cosmetic commodities.

The "20 per cent. promotions" are alleged to be granted to selected purchasers who receive the respondent's cosmetics at the regular discount from retail list price plus an additional discount allowance of 10 per cent. Such commodities are to be resold to the public at a 20 per cent. discount from the regular retail list price and the respondent allegedly restricts the additional 10 per cent. discount allowance to commodities actually sold by the purchasers during the course of the 20 per cent. promotional sale.

It is alleged that these "promotions" are granted at intervals and exist for short durations, and that the respondent sometimes assigns so-called "beauty counsellors" to assist.

Fair Trade Investigation

An investigation of resale price maintenance as practiced under the various State "Fair Trade" laws, is now being conducted and will be continued in the next fiscal year by the Federal Trade Commission.

A Commission resolution calls for investigation of the extent, effects and methods of the development of resale price maintenance under statutes legalizing it under certain conditions.

It is planned that the investigation shall embrace among other things (1) a study of the prices charged by manufacturers and retail dealers for commodities under price contract as compared with such prices for similar competing commodities not under price contract, (2) a study of the quality received by the consumer in his purchase both of commodities under price contract and of similar competing commodities not under price contract, and (3) methods employed in obtaining the support of industry and the retail and wholesale trades for resale price maintenance and in the practical establishment thereof. The inquiry is being conducted by the Commission's regular economic staff.

Federal Organization, Inc.

Misleading use of the word "Federal" in their advertising matter, implying that their products have been tested or approved by an agency or experimental laboratory of the United States Government, is alleged in a complaint issued by the Federal Trade Commission against Federal Organization, Inc., 198 Broadway, New York, and its president, Samuel L. Presner, 4434 Post Ave., Miami, Fla.

In the sale of devices and of medicinal preparations containing drugs, for the treatment of genital and urinary disorders, the respondents are alleged to have used in their advertising matter the word "Federal" and the phrase "Federal Research Laboratories" in a manner representing that their products had been Government tested and approved, and the statement "Federal Organization, Inc., Successors to Federal Research Laboratories," to represent that they own, control or operate a laboratory equipped for experimental work.

The complaint alleges that in fact the respondents' products have not been tested or approved by any experimental or testing laboratory; that the name "Federal Research Laboratories" is merely a trade name adopted by them; that they do not own or control a laboratory equipped for experimental work, and that their products have never been tested by a United States Government agency or laboratory.

Other false representations alleged to have been made by the respondents are that their devices and preparations are generally safe for use, are recommended by doctors, are a cure or remedy for weakness or nerve, gland, kidney, stomach or other disorders, and will increase sex power or vitality.

The complaint alleges that the respondents have disseminated false advertisements through failure to reveal that use of their devices and of their preparations containing iodine and yohimbine, by uniformed persons under the conditions recommended or under usual conditions, may in some cases cause serious injury to health.

F.D.A. Report

The May 1 report of the Food and Drug Administration discloses an increase in legal actions during March against drugs, cosmetics and devices alleged to be dangerous under the prescribed conditions of use, and therefore actionable under the sections of the new law which became effective immediately upon its enactment on June 25, 1938.

Seizure actions against drugs charged to be in violation of the new act, were directed against 456 packages of "B. B. Headache Powders" and 1008 boxes of "E. E. Powders," both represented as headache remedies and found to contain among other ingredients, bromides, acetanilid and caffeine. This continues a campaign against products of this type begun earlier in the year. Other products against which action was taken under the same section of the law were: 155 boxes of "Algoeratine," 8 boxes of "Cidic Comfort Compound" and 18 bottles of "Sodosal," pain-killers containing aminopyrine.

Actions taken against alleged dangerous cosmetics resulted in the seizure of 431 boxes of "Tan-Off," 42 packages of "Othine" both containing ammoniated mercury, a poisonous substance, and 12 bottles of "Farrs' For Gray Hair," a hair dye containing silver nitrate and diamidophenol hydrochloric acid.

Seizure of devices alleged to be dangerous under the prescribed conditions of use included the following nasal irrigation outfits: 30 of "HedKlear" and 22 of "Syn-O-Scope." Also seized were 116 nipple shields which contained lead, a poisonous metal.

The Administration reports the termination of a criminal action brought against Charlotte Kolmitz, trading as Cosmetic Manufacturing Company of Los Angeles, California, resulting in a fine of $250. This action was based on the shipment of a product known as "Lash Lure," an alleged dangerous cosmetic containing paraphenylenediamine, a poisonous aniline dye. This was the first criminal action to be terminated in the Courts under the new law.

NEWS

Associations

T. G. A. Convention

The Toilet Goods Association's fourth annual convention which will be held at the Hotel Biltmore, New York, May 22, 23 and 24, will not have any set speeches during the sessions as heretofore, according to the program committee. On the first day, May 22, Herman L. Brooks,

H. L. BROOKS

president of the Association will give the president's address reviewing the activities of the Association during the past year. H. Gregory Thomas, chairman of the Board of Standards, will report on the activities of the Board of Standards, with particular emphasis on the compliance with the Food, Drug and Cosmetic Act. Hugo Mock, counsel, will discuss recent legislation, State and Federal, affecting the toilet goods industry. There will be no business meetings on the second day, and on the morning of the third day, a closed business meeting for members of the Association will be held. The afternoon will be devoted to a general open forum for all who are interested in the toilet goods industry from advertising and business standpoints. The social events will include the musical comedy, "Stars in Your Eyes," featuring Jimmie Durante and Ethel Merman, and supper, Monday, May 22; Ladies' Bridge at the hotel, and golf for the men, May 23; banquet at the Biltmore, May 24. The committee urgently requests early reservations due to the congested conditions brought about by the World's Fair.

Proprietary Association Meets

The Proprietary Association holds its fifty-seventh annual meeting at the Biltmore Hotel, New York, May 15, 16 and 17. Meetings of the scientific, the foreign trade and the veterinary sections are scheduled for May 15, an advertising clinic at 2:30, May 16. A representative of the Federal Trade Commission speaks at this session on the subject, "One year of enforcement under the Wheeler-Lea amendments to the Federal Trade Commission Act." which will be followed by a general discussion of advertising.

Dr. Frankel Addresses Salesmen

Dr. Edward M. Frankel was the speaker at the luncheon meeting of the Salesmen's Association of the American Chemical Industry, held May 10 at the Chemists' Club in New York.

The Salesmen's Association is arranging for a series of speakers to address its membership at the luncheon meetings on the general subject, "Chemicals and the Purposes for Which They are Used in Key Industries." As a part of this program Dr. Frankel, consultant for the West Virginia Pulp and Paper Co., addressed the May 10 meeting on the subject, "Chemicals and Their Uses in the Paper and Pulp Industry."

Dr. Frankel has been engaged in scientific research and development since his undergraduate days, having made his debut before the American Chemical Society in 1911.

During his commercial career he has been connected with the manufacture of fine synthetic organic chemicals such as salicylic acid, aspirin, triphenyl phosphate and glycerol triacetate. Starting with experimental work on the utilization of sulphite waste liquor, he later

DR. E. M. FRANKEL

entered the alcohol business with the Publicker Commercial Alcohol Co. of Philadelphia.

During succeeding years, he operated his own plant, manufacturing and selling chemicals to the plastics industry, and, as an outgrowth of this business, became associated with E. F. Drew & Co., refiners of vegetable oils and manufacturers of products derived from these. In 1928, he joined the West Virginia Pulp & Paper organization, with which concern he continued as director of the research laboratory until 1935, (and with which he is still consultant), when he was appointed technical director of Oldetyme Distillers, Inc., in the production and distribution of whiskeys, gins, et cetera.

Committee Appointments

Committees for the coming year have been chosen by the Chicago Drug & Chemical Association of which Elmer F. Smith is president. The committee chairmen are: membership, William H. Schutte; finance, Ralph C. Jennings; golf, Robert

ELMER F. SMITH

O. Hereford; welfare, George A. Wrisley, chairman, Dudley F. Lum, vice-chairman; publicity William F. Bahe, chairman, Stewart Rice, vice-chairman; banquet and entertainment, Charles L. Drum, chairman, H. F. Woulfe, vice-chairman and George Epstein, program chairman.

Editor's Note—A mistake was made last month when Mr. Smith's election to the presidency of the Chicago Drug and Chemical Association was announced. His photograph, which should have appeared with the announcement, was instead used with the notice of the death of Louis J. Freundt.

Foragers' Outing

The Foragers' annual outing has been scheduled for June 24 at Great Captain's Island, an island in Long Island Sound offshore between Portchester and Greenwich. The trip to and from the outing will be made by boat and the usual clam chowder, swimming, races, baseball game and dinner are being planned. The boat which has been chartered for the trip will leave a convenient Manhattan dock at 9.30 A. M., returning at 7.00 P. M. The ticket which includes everything will cost $6.00.

Olive Oil Assn. Elects

At the annual meeting of the Olive Oil Association of America, Inc., the following officers were elected: president, E. H. Jacobsohn; vice-presidents, Carlo Bertolaia and Walter A. Benz; treasurer, Anthony J. Bendin; secretary, M. Charles Segui; directors, Henry Andreini, L. A. Pelton of Baltimore, S. Booras of Boston, and A. William Gerosa.

The association, which was organized in 1917, is now entering upon the third year of an intensified campaign for suppression of fraud and adulterations.

A.P.M.A. Meeting

The annual meeting of the American Pharmaceutical Manufacturers' Association will be held at Skytop Lodge, Skytop, Pa. the week of June 26.

Flavoring Extract Speakers

E. T. Brendlinger, secretary of the Flavoring Extract Manufacturers' Association, has announced the speakers for the convention to be held at the Hotel Pennsylvania, New York, June 5, 6 and 7.

Dr. Charles E. Vanderkleed, vice-president and technical adviser of McNeil Laboratories, Inc., is one of the speakers scheduled. He is chairman of the technical advisory committee of the American Pharmaceutical Manufacturers Association and a member of the joint technical advisory committee of the American Pharmaceutical Association and American Drug Manufacturers Association.

James F. Hoge, general counsel of the Proprietary Association, will address the

E. T. BRENDLINGER

convention of the drug features of the new Federal Food, Drug and Cosmetics law. Ole Salthe will lead a discussion of the new act and consider questions and problems confronting the association. Mr. Salthe is consultant to the Food and Drug Administration.

J. W. Sale, senior chemist, Food Division, U. S. Department of Agriculture, will address the convention on labeling flavoring extracts under the new Food, Drug and Cosmetic Act.

Chicago Bowling Season Ends

The A. B. C. bowling league formed by the Chicago Perfumery Soap and Extract Association last fall brought its season to a successful close with a dinner at the Stevens Hotel, April 19.

Speeches were made by A. A. Bafetti, president of the association, and R. F. McClellan, president of the bowling league. The prizes were awarded by T. H. Randecker, whose efforts were largely responsible for the formation of the league. The final team standing was as follows: Lilacs, Narcissus, Blushing Roses, Sweet Violets, Peonies, Geraniums. T. H. Randecker won the individual title and L. Piper took second place. Harry Spohr has been chosen president of the bowling league for next year.

A. A. BAFETTI

Two hundred attended the dinner which was arranged by Carl M. Black and Walter R. Nay. Next year each team will be sponsored by a company that is a member of the association and the winning team will receive a trophy. The number of teams will depend upon the number of sponsors available.

People

Norwich Advances Copley

Duncan M. Copley has been appointed chief chemist of Norwich Pharmacal Co., succeeding Dr. John Paul Snyder who recently resigned to engage in private practice as a technical advisor in Washington.

Mr. Copley became associated with Norwich in 1919 upon his graduation from Colgate University. In 1921 he was made chief analyst. He will now have charge of the five divisions of the Norwich laboratories—control, pharmaceutical research, biological, bacteriological and physical.

He is well known in the industry, having served with Dr. Snyder on the contact committee of the American Drug Manufacturers Association.

deLaire Here on Visit

Francois deLaire, of Fabriques deLaire, Issy, Paris, arrived in New York April 6 and is making his headquarters with Fabrique deLaire's American representative, Dodge & Olcott Co.

Mr. deLaire's visit at this time is partly concerned with the part which his company will have in the exhibit of perfume raw materials which is to be an important part of the French section of the World's Fair.

RICE, KAOLIN, COLLOIDAL STARCH
ZINC OXIDE

Powder Bases

Three outstanding products representing the ULTIMATE for use in a high-grade face powder. Well known for their adherent properties, extreme fineness and lightness of bulk . . . . . *Samples on Request, Gladly*

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BOSTON
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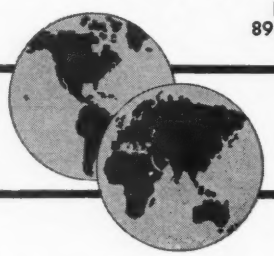
MEMPHIS, TENN.
1620 Carr Ave.

Water Soluble Gums
Thymol
Aromatics
Rice Starch

Waxes
Stearic Acid
Essential Oils
Zinc Oxide French



Cosmetic Raw Material
Oleo Resins
Perfume Bases
Olive Oil

Fruit Flavors
Food Colors
Quince Seed
Irish Moss

Louis Amic Visits Fair

Louis Amic of Roure Bertrand Fils & Justin Dupont, Paris, is in this country for the opening of the New York World's Fair. Mr. Amic is the president of the French building at the Fair. While in this country, he will make his headquarters with the company's American affiliate, Roure-Dupont, Inc., New York.

Dr. Goodman Speaks

Dr. Herman Goodman, spoke on "Newer Responsibility of the Pharmacist and Retailer in Cosmetics" before the Northern New Jersey Branch of the American Pharmaceutical Association on April 17.

Mohlman Marries

George Albert Mohlman, vice-president of the Package Machinery Co., of Springfield, Mass., was married April 23 to Mrs. Grace Dalrymple O'Malley, widow of Frank Ward O'Malley, New York journalist and magazine writer at Mrs. O'Malley's home in Brielle, N. J. Mr. and Mrs. Mohlman will make their home at Suffield, Conn.

Eugene Muller Visits Here

Eugene Muller of J. Mero & Boyveau, Grasse, France, is in this country, making his headquarters with Dodge & Olcott Co., New York. He will visit his friends and customers in the United States and Canada, returning to France in May.

Dr. Snyder in Shoreham Bldg.

Dr. John Paul Snyder who resigned from Norwich Pharmacal Co. to establish a private practice as a technical advisor in the pharmaceutical field has opened offices in the Shoreham Building, Washington.

Argentine Manufacturer Here

Dr. Carlos A. Torres, technical director of S. A. Perfumeria Dubarry, Anchorena 1775, Buenos Aires, Argentina, is in this country for a few weeks investigating American supplies. Nester J. Curat, the general manager of the company, is expected to arrive in New York by plane early in May.

Joins Magnus Staff

William W. Bower has joined the sales staff of Magnus, Mabee & Reynard, Inc., New York. Mr. Bower has had a great deal of experience in the traffic management and transportation fields and is well known among the importers and exporters of the drug industry. He comes to Magnus, Mabee & Reynard from J. E. Bernard & Co.

Anchor-Hocking Advances MacFarlane

Anchor-Hocking Glass Corp. has announced the appointment of R. Bruce MacFarlane as sales manager of Anchor Cap & Closure Corp., at Long Island City, N. Y., the closure division of Anchor Hocking Glass Corp.

Mr. MacFarlane joined Anchor-Hocking organization March 28, 1938 and served as home office representative of Anchor Cap & Closure Corp. until February 8, 1939, when he was appointed sales manager of the closure division.

Dr. Cook Goes Abroad

Dr. E. Fullerton Cook, Chairman of the U.S.P. XI Revision Committee, sailed April 21, with Mrs. Cook, for Europe to attend a meeting in Geneva, Switzerland, May 10 to 16, of the Technical Commission of Pharmacopoeial Experts of the League of Nations Health Organization.

E. F. COOK

At the meeting consideration will be given to the establishment of international standards for medicinal articles and to the preparation of an international pharmacopoeia. These standards will not, of course, be official but will be offered merely as suggestions to the various national pharmacopoeias.

Carl Berlin Decorated

Carl E. Berlin, Administrateur Délégué of S. A. Parfums Ciro, has been decorated by the French Government and made a Chevalier of the Legion of Honor.

Brooks General Chairman

Members of the cosmetic and drug industry in New York have organized the Cosmetic and Drugs Division of the United Jewish Appeal for Refugees and Overseas Needs to enlist support in the trade on behalf on the emergency refugee campaign. Herman L. Brooks has accepted the general chairmanship of the division.

Drug Exporting to France

Dr. F. Jonas of Paris is visiting this country for the purpose of contacting pharmaceutical and chemical firms who desire to export to France and other countries in Europe. When Dr. Jonas called at the offices of THE DRUG AND COSMETIC INDUSTRY he informed us of his intention shortly to establish a permanent residence in New York but he will also maintain his Paris office and spend several months each year in the foreign markets. Any manufacturer interested in direct representation in Europe for complete lines of pharmaceutical and chemical products or individual specialties, especially biological and glandular products, should communicate with him at 23 Rue Auguste Vitu, Paris.

Ray Comyns Joins Nu-Hesive

Ray Comyns who has been manager of the chain-store division of E. R. Squibb & Sons has resigned to become vice-president and director of sales and advertising of Nu-Hesive, Inc.

Francois Goby Arrives

Francois Goby, director of Tombarel Freres, Grasse, France, arrived in this country April 27 on the Champlain. He will visit the trade while here, making his headquarters with the company's American affiliate, Tombarel Products Corp.

Pedersen Joins Owens Can

John S. Pedersen, has been made a member of the Chicago branch sales staff of Owens-Illinois Can Co. He will cover the Illinois and Iowa territory. He goes to Owens-Illinois from the Continental Can Co. with which he had been associated for nine years.

Faverjon Visits Here

J. Faverjon, general manager of Payan & Bertrand, Grasse, France, for whom Gerard J. Danco, Inc., is exclusive agent in the United States and Canada, arrived in this country May 10 on the Ile de France.

Accompanied by Mr. Danco he will travel throughout the United States, calling on the friends he made on his last trip in 1937 and meeting the company's new customers.

Dr. Montague Resigns

Dr. J. F. Montague has resigned as a director of the National Foods, Drugs and Cosmetics Board of Trade, Inc., of which he was one of the incorporators, and has severed all connection with the organization.

We use the force of a TORNADO to process KOLMAR Soft-as-Silk POWDER and ROUGE

OUR EXTREMELY HIGH AIR PRESSURE process, developed in 1929, achieves that uniform particle size, fine satiny texture and perfect color distribution, for which Soft-As-Silk Powder has been universally recognized.

BY MEANS OF OUR COLOR PHOTOMETER we maintain perfectly uniform colors at all times and under every condition.

SOFT-AS-SILK POWDER CONTAINS ONLY the very finest materials which give it imperviousness to water and perspiration, superior appearance, adherence, and purity.

WRITE FOR SAMPLES OF KOLMAR SOFT-AS-SILK POWDER TODAY

Manufacturers of cosmetics for private label brand only. We never compete with our clients. We also protect the interests of our trade with Products Liability Insurance.

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Norman Kole . . . . . 11-108 Merchandise Mart, Chicago, Ill.
Warren Curry . . . 3980 Club Drive, Atlanta, Ga.
R. G. F. Byington . . . . . 155 N. Vermont Ave., Los Angeles, Cal.

KOLMAR LABORATORIES
MILWAUKEE • HOBOKEN

Tom Farrell in Hospital

Thomas R. Farrell, editor of THE DRUG AND COSMETIC INDUSTRY underwent an emergency operation for appendicitis at St. Vincent's Hospital, New York, May 7.

THOMAS R. FARRELL

Woodrow With Irma Coleman

R. H. Woodrow has joined the Irma Coleman Corp., Philadelphia, as vice president in charge of sales, after an absence of a year and a half from active business due to illness. Mr. Woodrow was formerly connected with the Elmo Sales Corp. for sixteen years in an executive capacity.

Zonite Appoints Pernice

M. L. Pernice, Jr., has been appointed advertising manager of Zonite Products Corp., New York. He succeeds S. Allen Reeder who has resigned.

New Thiamin Reference Standard

Synthetic Crystalline Vitamin B_1 has now been made the U.S.P. reference standard for what has long been known as Vitamin B_1 but is now called Thiamin Chloride, and this reference standard is now available, having been supplied by the U.S.P. Board of Trustees, with the cooperation of the U.S.P. Vitamin Advisory Board. Orders for this new Reference Standard should be sent to the Chairman of the Committee of Revision, Phila.

Thiamin Chloride, as a Crystalline substance, has been proposed for inclusion in the Second U.S.P. XI Supplement. If it is admitted the physical and chemical tests will be sufficient to determine its quality and therapeutic activity but when present in preparations or in solution, or when a part of the "Vitamin B Complex," its activity will have to be determined by the biological assay procedure recommended for official adoption.

I should appreciate your giving publicity to the announcement that this new U.S.P. Vitamin B_1 Reference Standard is now available.

Respectfully yours,

E. FULLERTON COOK,

Chairman, U.S.P. Committee of Revision.

Brauneiss-Burton

Walter M. Brauneiss, TOILET REQUISITES' advertising representative, was married to Ruth Heusser Burton, on May 6. The wedding took place at the home of the bride in Bellaire, Long Island, after which the couple left for a three weeks' honeymoon trip. They will live in Hollis, N. Y., upon their return.

Branigan Abroad

George V. Branigan, technical director of Ungerer & Co., is spending a month in Europe. While there he will give a series of lectures in England and Germany on the technical phases of essential oils.

Fred Rauch Ill

Fred Rauch, of S. B. Penick & Co., New York, was taken ill on a trip to Chicago and confined to a hospital in that city for several days. He has now returned to New York and is convalescing at his home.

Coal Tar Colors Listed

The Secretary of Agriculture has promulgated regulations under the new Federal Food, Drug, and Cosmetic Act listing more than a hundred coal-tar colors and providing for certification of batches of these colors as harmless and suitable for use in foods, drugs, and cosmetics. The regulations are based upon evidence which was submitted at public hearings in February. The regulations became effective immediately upon their publication in the Federal Register on May 9.

Among the colors are the food colors which have been voluntarily certified for some 30 years. Certification of coal-tar colors for use in drugs and cosmetics is required by the new Food, Drug, and Cosmetic Act of June 25, 1938. After this law becomes fully effective no coal-tar colors, except those from batches that have been certified, can legally be used in coloring foods, drugs, and cosmetics. The requirements involve not only the coal-tar colors themselves but mixtures of colors with harmless diluents.

The Secretary designated the Food and Drug Administration, which is charged with the enforcement of the Food, Drug, and Cosmetic Act, to administer the color certification system. That bureau has increased the number of chemists employed in its Color Laboratory and will begin the certification of colors as soon as samples are submitted by manufacturers.

The Secretary, on January 6, 1939, announced that manufacturers who wished to submit additional colors to be added to the list could do so without paying the $500 deposit required by the regulations if they submitted full and complete information concerning the additional colors by February 6, 1939. Samples of a number of such colors together with complete information were submitted, and it is anticipated that further public hearings will shortly be announced so that the addition of some 30 more coal-tar colors to the list may be considered.

The May 9, 1939, issue of the Federal Register can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C. The price of a single copy is 10 cents.

Companies

Norwich Elects Sumner Director

At the annual meeting of the stockholders of Norwich Pharmacal Co. held April 12, the following directors were

F. L. McCARTNEY

elected for 1939: Turner F. Currens, Melvin C. Eaton, Robert S. Eaton, John K. Hill, Guy L. Marsters, Frank L. McCartney, William P. McNulty, M. Webster Stofer, Howard A. Sumner, Otis A. Thompson and J. Bennett Turner.

At the organization meeting of the directors, the following officers were reelected: chairman of the board, Robert S. Eaton; president, Frank L. McCartney; vice-president and general manager, Melvin C. Eaton; vice-president in charge of advertising, M. Webster Stofer; vice-president in charge of purchasing, Guy L. Marsters; vice president, Turner F. Currens; vice-president, Oliver W. Benedict; secretary and assistant treasurer, William P. McNulty; treasurer and assistant secretary, John K. Hill.

Howard A. Sumner was elected a director to fill the vacancy made by the death of James S. Flanagan. Mr. Sumner has been with the company for twenty years and is at present assistant general manager.

Oliver W. Benedict, newly elected vice-president, has been in charge of the Norwich sales division for the past twenty years.

The chairman of the executive committee of the board of directors is J. Bennett Turner, and Robert S. Eaton is chairman of the finance committee.

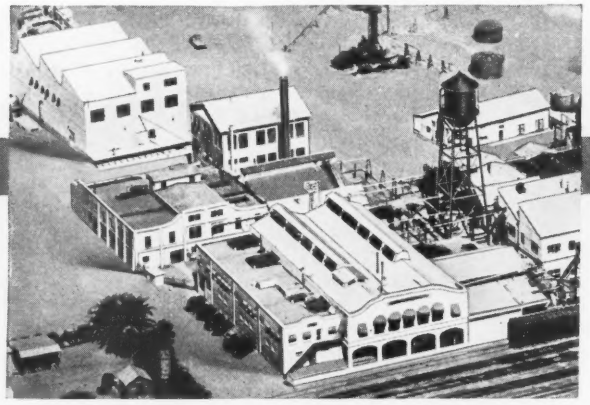
Exchange BRAND

Citric Acid

U·S·P·

CRYSTALS
GRANULAR
POWDERED

Exchange Lemon Products Company, Corona, California



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LEMON PRODUCTS
PLANT

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THE SUNKIST GROUP
OF 14,000
CITRUS GROWERS

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IMMEDIATE DELIVERY FROM WAREHOUSE IN NEW YORK. CHICAGO, PHILADELPHIA, SAN FRANCISCO

Aluminum Seal's 25th Year

In celebration of the twenty-fifth anniversary of its incorporation on March 25, Aluminum Seal Co., New Kensington, Pa., played host to nearly 2,000 employees and their families and friends at a silver anniversary "open house" held at the plant. Following the open house, executives, superintendents and foremen of the company were honored at an appreciation dinner sponsored by community businessmen.

The manufacture of aluminum seals was begun in 1910 as a divisional function of the Aluminum Co. of America. On March 25, 1914, Aluminum Seal Co. was incorporated as a separate organization and manufacture of aluminum seals was begun May 1 that year with only a few presses. Today, a modern four-story plant, representing 147,000 square feet of floor space, houses production equipment capable of producing more than five million finished items a day.

Some of the visitors to Aluminum Seal Company's silver anniversary open house watch a blanking press stamp and form Alseco seals from metal sheets.

Sharp & Dohme in Detroit

Sharp & Dohme, Inc., Philadelphia, has opened a branch office and warehouse in Detroit under the management of John Love, formerly branch manager in Miami. R. L. Youngblood will be in charge of sales.

Mennen Opening in Manila

Oliver Shaw, foreign sales manager of the Mennen Co., is in Manila where the company is opening a new branch office. G. Warren Heath, assistant foreign sales manager of the company, will be in charge of the new branch.

Gemco Laboratories Formed

Gemco Laboratories has been established at 221 West 27 St., Chicago, for the manufacture of private label and bulk cosmetics.

The new company has been formed by Milton N. Klimist, who was chief chemist for Princess Pat Ltd. and Gordon Gordon Ltd. for the past sixteen years, and John H. Genetske, for the past fourteen years factory superintendent for the same company.

Whittaker, Clark Appoints

Owing to the expansion of its business in the Toronto territory, Whittaker, Clark & Daniels, Inc., New York, has decided to carry stocks in Toronto and has appointed Richardson Agencies Ltd., to represent the company.

Only recently the company appointed Harry Holland & Son Inc., to represent it in Chicago.

Rigaud Fair Exhibit

Rigaud, New York and Paris, will have an exhibit at the New York World's Fair, occupying an important space in the main rotunda of the Consumers Building. The Rigaud products will be on display and there will be special packages created in Paris and first introduced to the public at the Fair.

Swindell Bros. Changes

John J. Jeffries, executive vice-president of Swindell Brothers, Inc., has been placed in charge of the general management of the business. Joseph B. Scott, sales manager, will move from New York to the home office in Baltimore, where he will continue as general sales manager of the company.

Industrial Chem. Moves in Chi.

The Industrial Chemical Sales Division of West Virginia Pulp & Paper Co., Chicago, has moved to 35 East Wacker Drive, that city. The telephone remains State 7336. This move gives the company larger and better office facilities.

J. E. Sharp, president of Aluminum Seal Co., cuts the birthday cake at the appreciation dinner given by community business men in honor of the company's twenty-fifth anniversary.

Perfume Materials at the Fair

A group of French manufacturers of both natural and synthetic raw materials have united to organize a collective exhibition in the French Building at the World's Fair. The companies participating in the exhibition are: Bertrand Freres, Grasse, represented in this country by P. R. Dreyer Inc.; Anciens Ets. Bing Fils, Paris, represented by Richard & Oppenheimer; Camilli, Albert & Laloue, S. A. Grasse, represented by George Lueders & Co.; S. A. des Ets. Antoine Chiris, Grasse, represented by Antoine Chiris Co.; Compagnie Africaine des Plants a Parfum, S. A., Paris, represented by Naugatuck Aromatics; Manufacture des Produits Chimiques de Dauphin, Bourgoin, represented by Eric Coupey; Ets. Descollonges Freres, Villeurbanne-Lyon, represented by Benjamin French, Inc.; V. Fringhian, S. A., Paris; S. A. des Ets. V. Hausslauer, Paris; Fabriques de Laire, Issy les Moulineaux, represented by Dodge & Olcott Co.; Lautier Fils, Grasse, represented by Lautier Fils, Inc.; Mero & Boyveau, Grasse; Parfums de France, Paris; Payan-Bertrand, S. A., Grasse, represented by Gerard J. Danco Inc.; Parfumerie Moderne; Paris, Revue des Marques, Paris; S. A. des Ets. Roure-Bertrand Fils et Justin Dupont, Grasse, represented by Roure-Dupont, Inc.; S. A. Schmoller & Bompard, Grasse, represented by Florasynth Laboratories Inc.; Societe Cherifienne, Casablanca, Morrocco; S. A. Tombarel Freres, represented by Tombarel Products Corp.

The exhibition is in charge of the following committee: president, Louis Amic; vice-president in charge of synthetic raw materials, Francois de Laire; vice-presidents in charge of natural products, Francois Goby and Francois Morel; committee reporter Leon Chiris.

Lilly Entertains Pharmacists

During the first week in April the graduating class of the School of Pharmacy of the University of Maryland visited the plant of Eli Lilly & Co., Indianapolis. Dr. Marvin J. Andrews and Dr. F. J. Shama of the School of Pharmacy faculty accompanied the students.

Consumers Import Co. Moves

Consumers Import Co., Inc., New York, after eleven years at one address moved May 8 to 342 Madison Ave., that city. The new quarters are expected to prove much more convenient.

New Goldschmidt Pamphlet

Th. Goldschmidt Corp., New York, has issued a new pamphlet discussing emsulsifiers and lanolin products, including Tegin, Tegin P, Tegacid, Tego Stearate, and preservatives. As usual, formulas are given and suggestions are made for the use of these products.

Lydia Pinkham Management

The Massachusetts Supreme Court has granted a permanent injunction in an action brought by Arthur W. Pinkham, president of the Lydia E. Pinkham Medicine Co., to restrain Aroline P. Gove and her daughter, Lydia Pinkham Gove, from interfering in the operation of the Pinkham company in any way.

This brings to a close the legal battle which has been carried on for the past three years by the two factions, the Gove and Pinkham branches of the family, which owns the 112 shares of the company's stock equally between them.

The Court also ruled that the Goves should repay $20,000 spent for advertising in 1936 in excess of the amount authorized, as well as $15,770.81 which the firm paid to them as interest on cash loans.

Florasynth Wins Award

At the sixth annual exhibit and display of the California Cosmetic Association in Los Angeles on February 25, the cup for the most outstanding and educational display was awarded to Dr. Alexander Katz of Florasynth Laboratories, Inc. The prize winning display featured "Hawaiian Garden Perfume." Two cups were presented to Florasynth—the large cup awarded each year, and a small replica which becomes the permanent possession of the company.

The cups awarded to Florasynth Laboratories for its display at the annual exhibit of the California Cosmetic Association.

Sharp & Dohme Publication

The first issue of the Sharp & Dohme Seminar, a publication for physicians which will be issued quarterly by Sharp & Dohme, appeared in April.

The first section of the magazine is devoted to "clinical conferences," and deals with case histories generously illustrated with X-ray illustrations. The second part of this issue is devoted to pneumococcus typing and the third section is given over to abstracts of literature of current seasonal interest to the physician.

Dreyer's Coast Office

The new California office of P. R. Dreyer, Inc., under the management of Edward R. Trippe, Jr., is located at 2309 E. 8th St., Los Angeles. Complete stocks will now be maintained on the west coast.

Package Machinery at Fair

Several of the 78 different models of wrapping machines produced by the Package Machinery Co. will be seen in operation at the New York World's Fair. One model may be seen in the American Tobacco Co. exhibit wrapping Lucky Strike cigarette packages, another in the Du Pont exhibit wrapping individual pieces of candy in "cellophane." The Pepsodent Co. uses an adjustable FA to wrap 10 cent cartons of Pepsodent Tooth Paste in "Cellophane," and the Continental Baking Co. operates an F-5-C cup cake wrapping machine.

National Oil's New Plant

Perc S. Brown, vice-president in charge of vitamin divisions of National Oil Products Co., Harrison, N. J., has announced plans for construction of a new plant in Cedartown, Ga., for the production of a new vitamin B complex product for use in foods and pharmaceuticals.

The capacity of the new plant with that of the company's subsidiary, the Vitab Corp., Emeryville, Calif., will make possible a three-fold increase in the production of vitamin B complex liquids.

Chiris Sails

Leon Antoine Chiris, chairman of the board of Antoine Chiris Co., New York, and Administrateur—Delegue of Ets. Antoine Chiris, Grasse, France, sails on the Normandie, May 17th, after a short visit to this country in connection with the French Exhibit at the New York World's Fair.

National Moves N. Y. Office

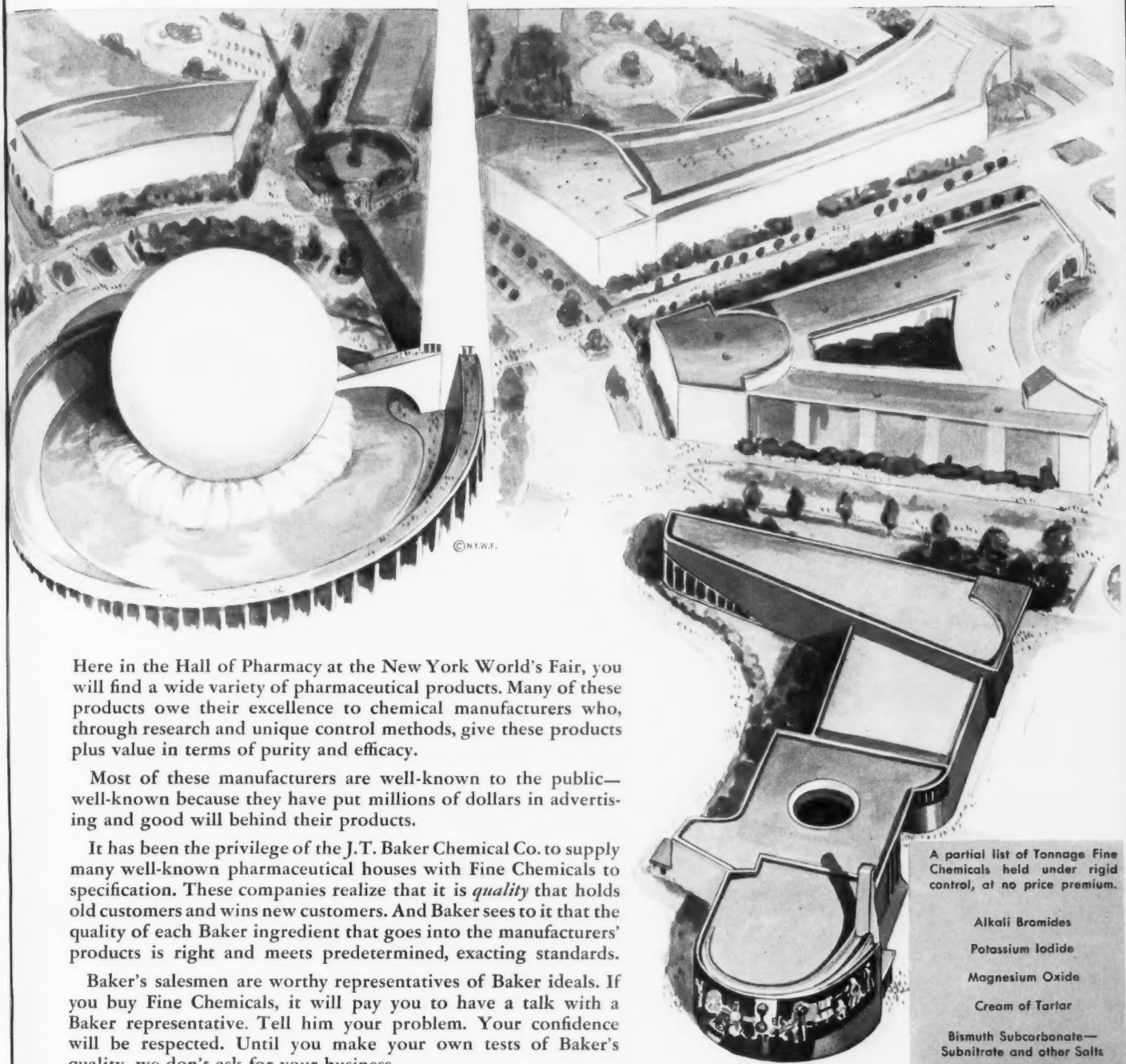
National Collapsible Tube Co., London, has announced that its New York office is now located at 480 Lexington Ave. The telephone is PLaza 8-0208. Representatives working from this office are F. C. Allen, Jr. and W. W. Willison.

Monsanto Acquires Resinox

Monsanto Chemical Co. has acquired Resinox Corp., previously owned jointly by Commercial Solvents Corp. and Corn Products Refining Co. All Resinox personnel is being retained.

Monsanto's acquisition of Resinox is its second major move in the plastics industry in thirteen months. In April, 1938, the Fiberloid Corp., Springfield, Mass., pioneer maker of plastics, became the Plastics Division of Monsanto.

...IN THE PHARMACEUTICAL CENTER OF THE WORLD OF TOMORROW



Here in the Hall of Pharmacy at the New York World's Fair, you will find a wide variety of pharmaceutical products. Many of these products owe their excellence to chemical manufacturers who, through research and unique control methods, give these products plus value in terms of purity and efficacy.

Most of these manufacturers are well-known to the public—well-known because they have put millions of dollars in advertising and good will behind their products.

It has been the privilege of the J.T. Baker Chemical Co. to supply many well-known pharmaceutical houses with Fine Chemicals to specification. These companies realize that it is *quality* that holds old customers and wins new customers. And Baker sees to it that the quality of each Baker ingredient that goes into the manufacturers' products is right and meets predetermined, exacting standards.

Baker's salesmen are worthy representatives of Baker ideals. If you buy Fine Chemicals, it will pay you to have a talk with a Baker representative. Tell him your problem. Your confidence will be respected. Until you make your own tests of Baker's quality, we don't ask for your business.

A partial list of Tonnage Fine Chemicals held under rigid control, at no price premium.

- Alkali Bromides
- Potassium Iodide
- Magnesium Oxide
- Cream of Tartar
- Bismuth Subcarbonate—Subnitrate and other Salts
- Caustic Potash and Soda Sticks and Pellets
- Rochelle Salt
- Lead Acetate
- Salicylates

J. T. BAKER CHEMICAL CO., Phillipsburg, New Jersey

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Baker's fine chemicals

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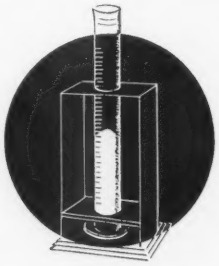
ANALYZED REAGENTS Baker's

STURGES STANDARD



More than just PRECIPITATED CHALK

Manufacturers of Dentifrices, Face Powders, Tablets and others who use precipitated chalk, have for many years recognized the essential value in the rigid uniformity maintained for STURGES STANDARD, in any grade of precipitated chalk.

Long, specialized research in precipitated chalk has developed many special grades of great value in improved formulation. These grades, as always, when once established in a formula, will have that rigid uniformity and quality which precipitated chalk users recognize as "STURGES STANDARD."

JOHN & E. STURGE
LIMITED

Distributors:

H. J. BAKER & BRO.

271 Madison Ave. • New York, N. Y.

SEND FOR SAMPLES
of any of the designs pictured here or write for this portfolio of "True Blue Packaging Ideas."

FRENCH SQUARE
¼, ½, 1, 2, 4, 6, 8, 10 oz.
Also Available in Crystal Clear Glass.

SQUAT JAR
½, 1, 2, 3, 4, 8, 18 oz.

CABINET SQUARE
1, 2, 2½, 3, 4, 6, 8, 16, .32 oz.

THE CHESAPEAKE OVAL
Available in 4, 6, 8, 12, 16, 32 ounce sizes

Give your Product the Look of a

BLUE BLOOD

True blue . . . . blue book . . . blue blooded. In our spoken language—and in the language of the eye—Blue has come to stand for dependability, quality, prestige.

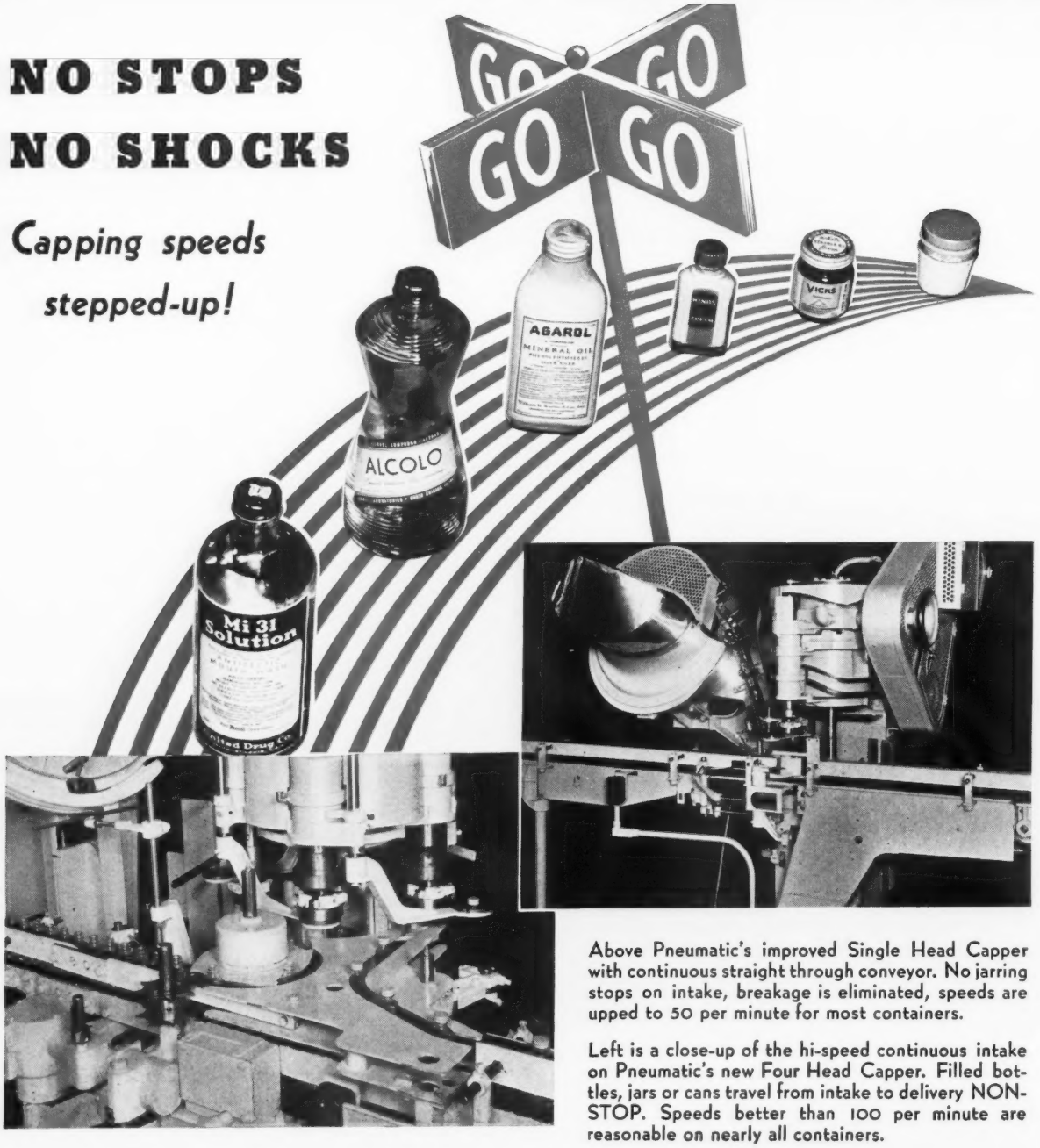
Pictured above is one of the newer designs in Maryland Blue . . . . the Chesapeake Oval. A smartly styled design—well balanced, grips securely, packs compactly, provides adequate label space. At the point-of-sale, and at the time of use, its modern lines and rich color will *identify* your product, speak for its *quality*.

MARYLAND GLASS CORPORATION, BALTIMORE, MD. . . . New York: 270 Broadway . . . Chicago: Berman Bros., 1501 S. Laflin Street . . . St. Louis: Carl Floto, 908 Clark Avenue . . . . Memphis: William T. Porter, 806 Dermon Building . . . . San Francisco: Owens-Illinois Pacific Coast Company.

Maryland Blue
BOTTLES
AND
JARS

NO STOPS
NO SHOCKS

Capping speeds stepped-up!



Above Pneumatic's improved Single Head Capper with continuous straight through conveyor. No jarring stops on intake, breakage is eliminated, speeds are upped to 50 per minute for most containers.

Left is a close-up of the hi-speed continuous intake on Pneumatic's new Four Head Capper. Filled bottles, jars or cans travel from intake to delivery NON-STOP. Speeds better than 100 per minute are reasonable on nearly all containers.

Pneumatic keeps step with glass container progress by improving the efficiency of its bottling machinery. Glass packages are being made lighter, stronger and more standardized to lower their cost. Modern Pneumatic equipment, like the automatic cappers pictured here, steps up speeds and reduces container breakage to give a still lower cost per container.

PNEUMATIC SCALE CORPORATION, LTD.
70 Newport Ave., Quincy, Mass. (Norfolk Downs Station)
Branch Offices:
NEW YORK • CHICAGO • SAN FRANCISCO • LOS ANGELES

PNEUMATIC
PACKAGING & BOTTLING EQUIPMENT

LOWER COST PER CONTAINER

Penick Guide

S. B. Penick & Co., New York, has issued a very useful and interesting guide to New York for the convenience of its friends who attend the New York World's Fair. The small pocket-sized booklet contains 111 pages and is generously illustrated with maps and photographs. In addition to information about the Fair, it tells a great deal about New York City, its points of interest, historical background, means of transportation and, traffic regulations. A feature of it is a plan for seeing New York in five days and nights. Copies are available upon request.

Colloidal Pharmacals Moves

Colloidal Pharmacals, Inc., producer and distributor of toiletries and drug items containing colloidal minerals, has moved its executive offices to 565 Fifth Ave., New York.

Maine Defeats Chain Tax

A proposed tax on chain stores was defeated in the Maine senate April 19. The bill proposed a straight tax on chains in place of a graduated tax which was defeated by the senate on April 13.

Scovill Moves in New York

The New York sales office of Scovill Manufacturing Co., Bridgeport, Conn., was moved May 1 to the Chrysler Building, 42nd St. and Lexington Ave.

Maine Fair Trade

Governor Lewis O. Barrows of Maine has signed an unfair sales act endorsed by the Maine Pharmaceutical Association. The bill provides for a minimum markup of 6 per cent. and is designed to put an end to loss leader selling.

Financial

American Home Earns More

American Home Products Corp. and subsidiaries report for the March quarter a net profit of $1,073,610, equal to $1.33 each on 804,851 shares of capital stock. This compared with $741,554, or $1 a share on 741,060, shares earned in the March quarter of 1938.

Anchor-Hocking Earnings Up

Anchor-Hocking Glass Corp. and subsidiaries report for the twelve months ended March 31, net profit of $1,055,864, equal to $1.10 each on 715,550 shares of no-par common stock. The net profit for the year 1938 was $752,400, or 68 cents a share on the common stock.

Bristol-Myers

Bristol-Myers reports for the three months ended March 31, a net income of $870,870, or $1.27 a share on the 682,901 shares of $5 par capital stock outstanding.

For the twelve months ended March 31, 1939, consolidated net earnings amounted to $2,505,834, or $3.67 a share.

Commercial Solvents in Black

Commercial Solvents Corp. reports for March quarter a net profit of $198,042, equal to 7 cents each on 2,636,878 shares and contrasted with a net loss of $214,448 in the same quarter last year. The amounts for both periods are exclusive of the corporation's equity in results of Commercial Molasses Corp., whose accounts are no longer included in the consolidation.

Dow Dividends

At a meeting of the board of directors of Dow Chemical Co. held April 18 dividends were declared payable May 15 to stockholders of record May 1 as follows: on preferred stock 1¼ per cent.; on common stock without par value, 75 cents per share.

Hinde & Dauch Earns Less

Hinde & Dauch Paper Co. and subsidiaries report for the March quarter a net profit of $152,575, equal to 30 cents each on 360,250 common shares and comparing with a net profit of $194,904, or 38 cents a common share in the same quarter last year. The gross sales were $3,078,655 against $3,058,570.

Lehn & Fink Doubles Net

Lehn & Fink Products Corp. reports for the March quarter a net profit of $232,307, or 58 cents each on 400,000 shares of common shares. This compares with a net profit of $103,891, or 26 cents a share in the same period last year.

Norwich Earnings Rise

Norwich Pharmacal Co. and subsidiary report for the March quarter a net profit of $165,785, equal to 21 cents a share on 800,000 capital shares outstanding after, two-for-one stock split. This compares with $136,275, or 17 cents a share last year, based on present capitalization.

Parke, Davis Improves Net

Parke, Davis & Co. and subsidiaries report for the March quarter a net profit of $2,731,048, equal to 55 cents each on 4,894,051 shares of no-par capital stock. This compares with a net profit of $2,281,344, or 47 cents a share, earned in the first quarter of 1938.

For the twelve months ended March 31, the net profit was $9,089,660, or $1.86 a share. The revised net profit for the twelve month period proceding was $8,788,327, or $1.80 a share.

Walgreen Earnings Advance

Walgreen Co. and subsidiaries report for the six months ended March 31, net profit of $1,341,713, equal to 86 cents each on 1,292,485 common shares and comparing with $881,832, or 50 cents a common share in the six months ended March 31, 1938. Net sales totaled $36,420,009, against $35,200,295.

Zonite Earns Less

Zonite Products Corp. and subsidiaries report for the March quarter net profit of $12,337, after reserve for future advertising of $38,000 equal to 1 cent each on 825,656 capital shares. This compares with a net profit of $28,100 in the same quarter last year after a $50,000 reserve for future advertising, or 3 cents a share.

Obituaries

David J. Block

David Julian Block, director of Block Laboratories, Chicago, died April 8 at his home in Winnetka, Ill. He was sixty-four years old.

Mr. Block was credited with the invention of several chemical processes among which was a process for making artificial sugar and one for making gum arabic.

Norman A. Buttle

Norman A. Buttle, formerly president and vice-president, and since 1934 treasurer of Winthrop Chemical Co., Inc., and the Antidolor Manufacturing Co., both of New York, died at the General Hospital in Paterson, N. J., April 17. He was sixty-two years old.

NORMAN A. BUTTLE

Mr. Buttle was born in Ireland and came to this country in 1887. For several years he was a teacher in a business school and in 1899 he started his career in the drug industry. In 1919 he was one of the founders of Winthrop Chemical Co., of which he was president until 1929. From 1929 to 1933 he was vice-president and since 1934 he has been treasurer.

THAT FLORAL NOTE . . . . . .

One of the most important floral groups is the Orange Blossom, Neroli, Petitgrain selection. Each of these products imparts that necessary floral character which blends into so many varied compositions, lending an aristocratic rich note.

The important consideration is that the quality should be one on which you can depend for satisfactory results. These results may be had on insisting on Bertrand Freres' products which are backed up by the B. F. seal of quality.

Above is pictured one of our auxiliary factories in the heart of the producing regions. This facilitates prompt extraction of quality flower products at reasonable prices.

ORANGE ABSOLUTE

NEROLI

B F TRADE MARK

FOLIA

PETITGRAIN

BERTRAND FRÈRES

GRASSE, FRANCE

Sole U.S. Representative P. R. DREYER Inc. 119 W. 19th St., New York City

FOR PERFECT EMULSIONS OF FIXED OILS

•HOPKINS' FACTOLAC

An absolutely pure, harmless neutral agent for making PERMANENT emulsions of both fixed and volatile oils. Insures the HOMOGENEOUS mixture of oils and water that *never* turns thick or viscid—and *always* stays creamy and smooth like rich new milk. FACTOLAC is already prepared. You need no special apparatus for this exceptional emulsifier.

ON REQUEST: SAMPLES — QUOTATIONS — BOOK CONTAINING FORMULAS

Note: Our Laboratories are at your service:—we invite the opportunity of working out the ideal emulsifying formula for your product.

IF YOU ARE HAVING ANY TROUBLE WITH YOUR SOAP

•HOPKINS' NEUTRAL POWDERED WHITE SOAP

will prove a revelation. Let us send you a sample of this original Neutral White Soap, used in many of the country's largest-selling preparations. HOPKINS' NEUTRAL POWDERED WHITE SOAP is ideal for its pure whiteness; profuse, lasting lather; fine meshing qualities; freedom from soapy smell and free alkali; uniformity; resistance to changing temperature; anti-rancidity; fine appearance of finished product. Made under the exclusive HOPKINS formula that first brought powdered neutral white soap into wide use.

WRITE FOR TRIAL SAMPLES AND PRICES

J. L. HOPKINS & CO. *220 BROADWAY* NEW YORK

Importers, Millers and Manufacturers of the World's Best Botanical Crude Drugs

G. Edson Clark

G. Edson Clark, New Jersey sales manager for Whittaker, Clark & Daniels, Inc., New York, and a brother of Samuel H. Clark, president of the company, died at his home in East Orange, N. J., of a heart attack April 24. He was fifty-six years old.

After spending many years in the building business in Newark with his father, the late George S. Clark, he became associated with Whittaker, Clark & Daniels in 1934.

Edwin Percy Gamble

Edwin Percy Gamble, son of James Lauder Gamble, one of the founders of Proctor and Gamble Co., died April 23 at his home in Palo Alto, Calif. He was eighty-six.

Mr. Gamble who was a member of the second class to graduate from Cornell University had been in retirement for many years and had lived in Palo Alto since 1903.

Bernard A. Jenney

Bernard A. Jenney, president of the Jenney Manufacturing Co., Boston, died April 3 at his home in Brookline, Mass. He was eighty-one years old.

Mr. Jenney was for many years treasurer of the Eastern Drug Co., before it was merged with McKesson & Robbins. After the merger he continued for some time with McKesson & Robbins, resigning to give all his time to the Jenney Manufacturing Co. which had been founded by his father in 1812.

Frank R. Jones

Frank R. Jones, formerly vice-president of Johnson & Johnson, New Brunswick, N. J., died suddenly at his home in Highland Park, N. J., April 9. He was seventy-six years old.

Mr. Jones was associated with the J. Elwood Lee Co., when it was merged with Johnson & Johnson in 1905 and continued with Johnson & Johnson until his retirement.

Robert S. Livingston

Robert S. Livingston, foreign credit manager for Colgate-Palmolive-Peet Co., Jersey City, was injured fatally in an automobile accident in Newark, April 1. He was forty-five years old.

James H. Marshall

James H. Marshall, a founder of and consultant manager of the Northwestern Drug Co., Minneapolis, died April 13 in that city. He was eighty-three years old.

He served as president of the Federal Wholesale Druggists' Association of the United States and Canada in 1922 and again from 1927 to 1931. He was honorary president of the association at the time of his death.

Henry Pfeiffer

Henry Pfeiffer, president of William R. Warner & Co., New York, died April 13 at his home in that city. He was eighty-two years of age. Born in Lewiston, Pa., Mr. Pfeiffer moved with his parents to Cedar Falls, Iowa, when still a boy. He subsequently became a druggist's apprentice, later qualified as a senior pharmacist, and finally went into business on his own account. In 1891 he sold his drug store and went to St. Louis to enter the

HENRY PFEIFFER

manufacturing field. In 1901 he founded the Pfeiffer Chemical Co. In 1908 he purchased William R. Warner & Co. At the time of his death, Mr. Pfeiffer was vice-president and a director of the Richard Hudnut Co.; president Bauer Chemical Co.; Vince Labs, Inc.; the Nonspi Co., and the Sanitol Co.; vice-president Hudnut Sales Co., and a director of Warner International. On March 7, 1882, he married Miss Annie Merner. Surviving besides his widow are five brothers including Gustavus A. Pfeiffer, of New York, president of the Richard Hudnut Co.

Elmer A. Royer

Elmer A. Royer, a statistician for Proctor & Gamble Co., Cincinnati, died April 4 in a hospital in that city after a prolonged illness. He was thirty-four years old.

Charles W. Rusk

Charles W. Rusk, assistant to the advertising manager at Proctor & Schwartz, Inc., Philadelphia, died unexpectedly April 22. He was fifty-seven years old and had been connected with the Proctor advertising department for over twenty years.

Julia Cooper Schieffelin

Mrs. Julia Cooper Schieffelin, widow of Schuyler Schieffelin, died April 13 at Doctors Hospital, New York, after a short illness. She was fifty-four years old.

Mr. Schieffelin, who died in 1935, had been vice-president of Schieffelin & Co., prior to his retirement in 1910

Walter B. Swindell, Jr.

Walter B. Swindell, Jr., president of Swindell Brothers, Inc., Baltimore, died suddenly April 6 in that city. He was fifty-nine years old.

Mr. Swindell, who had been associated with the glass industry for many years is survived by his widow, and a son and daughter by his first marriage.

Julian F. Thompson

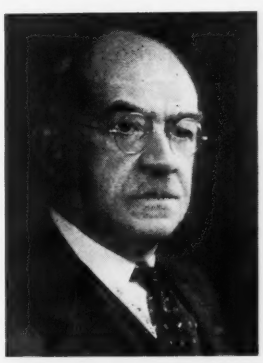
Julian F. Thompson, treasurer of McKesson & Robbins, Inc., died April 21 at his home in New York following a week's illness of influenza. He was fifty-one years old.

Mr. Thompson was born in Newton, N. J., and after his graduation from Princeton in 1911 engaged in banking. After the war, he became a partner in Bond & Goodwin, commercial bankers. He resigned in January, 1930, to become treasurer of McKesson & Robbins. His suspicions about the company's wholesale drug department were responsible for the investigation into the affairs of McKesson & Robbins.

Mr. Thompson was also known as a playwright, being the author of "The Warrior's Husband" which was produced on Broadway in 1934 and which is probably best known as the vehicle in which Katharine Hepburn was first starred.

R. E. Lee Williamson

R. E. Lee Williamson, secretary of the Federal Wholesale Druggists' Association, treasurer of the Noxzema Chemical Co., and manager of the Mutual Drug Co., Cleveland, died at his home in Baltimore, April 29. He was seventy years old.



R. E. LEE WILLIAMSON

Mr. Williamson had been in poor health for about a year. He was a former president of the Maryland Pharmaceutical Association and for more than fifteen years served as president of the Baltimore Retail Druggists' Association.

INDUSTRY'S BOOKS

Any book reviewed in this section can be purchased direct from THE DRUG AND COSMETIC INDUSTRY at regular publisher's price.

The New Food, Drug, and Cosmetic Legislation, Vol. VI, No. 1 of Law and Contemporary Problems, published by Duke University School of Law, $.75.

Here, as far as is now possible, are answers to questions of labels, labelling, deleterious substances, etc. that now harass manufacturers of drug and cosmetic products. This issue is divided into a series of articles, each covering a single aspect of the legislation, in which specific sections of laws are covered one at a time and thoroughly discussed. Finally, a reasonably complete index permits single subjects to be found without the necessity of reading the whole work.

Individual articles are as follows:

The Food, Drug, and Cosmetic Legislation of 1938: Its Legislative History and Its Substantive Provisions, by David F. Cavers.

The Formulation and Review of Regulation Under the Food, Drug, and Cosmetic Act, by Ralph F. Fuchs.

The Enforcement Provision of the Food, Drug, and Cosmetic Act, by Frederic P. Lee.

The Control of False Advertising Under the Wheeler-Lea Act, by Milton Handler.

An Appraisal of the New Drug and Cosmetic Legislation from the Viewpoint of Those Industries, by James F. Hoge.

The Federal Food Legislation of 1938 and the Food Industry, by Robert W. Austin.

Consumers Appraise the Food, Drug, and Cosmetic Act, by Louise G. Baldwin and Florence Kirlin.

Representation of the Consumer Interest in the Federal Government, by Saul Nelson.

State Food, Drug, and Cosmetic Legislation and Its Administration, by Ole Salthe.

Textbook Of Pharmaceutical Arithmetic, by the late Theodore J. Bradley, Phm.D., A.M., B.S., Edited and Revised by W. T. Bradley, A.M., A.B., and Carroll B. Gustafson, Ph.C., B.S., Second Edition, 12 mo., 199 pp., Lea & Febiger, Phila., Cloth, $2.25 net.

This revision of the late Dean Bradley's well-known work follows its original closely, but meets the new standards set by the U.S.P. Since ratio and proportion are so useful in pharmaceutical and chemical arithmetic, the book begins with a consideration of these topics. The subject is developed by example and practice. An adequate index enables one to turn quickly to an example covering any particular problem in arithmetic which may present itself.

Guide To Balanced Diet, by Victor H. Lindlahr, 96 pp., size 7" x 10", National Nutrition Society, Inc., Cloth, $2.00.

Victor H. Lindlahr is Editor of Journal of Living and President of National Nutrition Society. The biggest problems facing us today is to learn how to eat intelligently by applying the facts and data that science has uncovered. What is equally important, man must learn how to eat to cure those diseases which come from eating incorrectly. Table of Contents: Special diet plans for—Acne, pimple, bad complexion; Acidemia; Arthritis, rheumatism, gout; Anemia; Kidney disease; Constipation; Ulcers, Colitis; Diabetes; Gas and heartburn; Gall bladder disorders; High blood pressure, heart trouble, hardened arteries, old age; Reducing weight; Gum troubles and catarrh; Gaining weight; Hay fever and allergic diseases; Children; Pregnancy; The protective foods; Meat substitutes; Soups; Beverages; The Proteins; The Fuel foods; Balanced guide menus for Spring, Summer, Fall and Winter; Keeping the body alkaline; The Vitamins; General notes; The Mineral Foods; Additional food charts; Food value charts.

"Rheumatism" by Otto Meyer, M.D., 128 pp., Elliot Publishing Co., New York, 128 pp., cloth $1.00.

Dr. Otto Meyer shows the connection between the so-called rheumatic ailments and concealed infection of the veins (phlebitis). In most cases of rheumatism, phlebitis is the focal infection where the toxins that cause rheumatism are produced. The author draws the attention of the reader to two important facts: first that phlebitis, especially the latent (concealed) type, is the most common of all focal infections and secondly that in the case of phlebitis the toxin-producing infection is situated directly within the bloodstream into which the poisons are discharged. Therefore in order to cure rheumatism it is necessary to remove its cause namely the concealed phlebitis.

The Fundamentals of Internal Medicine, by Wallace Mason Yater, A.B., M.D., M.S., 1021 pp., Illus., D. Appleton-Century Co., New York, cloth $9.00.

This volume is designed primarily as an introduction to the subject of internal medicine—that branch of clinical medicine dealing with diagnosis and the principles of treatment, especially nonsurgical. A rigid attempt has been made in this work to adhere to the most commonly accepted concepts. There is much difference of opinion in regard to the classifications of diseases. The author has tried to present the simplest and most practical. The contents at the beginning of each section are designed to serve as classifications. Where possible diagnosis and treatment have been considered at the end of a group of diseases. Only rational therapy of proved value has been included. Tables of differential diagnosis have been prepared to simplify this subject as much as possible. Of special value is the long list of authoritative contributors who have aided in the preparation of certain sections of this book. This work is divided into 21 major sections as follows: Diseases Of The Heart—Diseases Of The Blood Vessels—Diseases Of The Kidneys—Diseases Of The Blood And Blood-Forming Organs—Diseases Of The Respiratory System—Diseases Of The Digestive System—Diseases Of The Locomotor System—Diseases Of The Endocrine Glands—Diseases Of The Spleen And Reticulo-Endothelial System—Diseases Of Metabolism—Diseases Of Allergy—Diseases Due To Intoxications—Diseases Due To Physical Agents—Diseases Due To Vitamin Deficiency—The Infectious Diseases—Diseases Of The Nervous System—Mental Diseases—Diseases Of The Skin—Diseases Of The Ear—Diseases Of The Eye—Dietetics.

Allergic Diseases—Their Diagnosis And Treatment, by Ray M. Balyeat, M.A., M.D., F.A.C.P., 547 pp., Illus., Fifth Ed., F. A. Davis Co., Phila., Cloth $6.00.

The First Edition of this work was undertaken because the author realized the necessity of a manual explaining, in a general way, the chief cause of asthma and hay-fever. Since the cause of most hay-fever and about fifty to sixty per cent. of asthma is due to pollen from wind-borne pollinated plants, it was necessary to discuss in detail the flora of the United States. The protean manifestations of the allergic state have made the medical profession realize the importance of the field of allergy. Today it is conceded that a large number of symptom-complexes may be due wholly or partially to contact, inhaled or ingested allergens. Since the fourth edition of the book was published two years ago, the interest taken by the medical profession in the study of symptoms due to allergy has been greater than in any other previous period. During the past two years the greatest advancement has been made in the study of symptoms due to allergy other than those of hay-fever and asthma. In the preparation of this Fifth Edition, the author has tried to discuss the various subjects in a practical manner, offering case reports as a means of teaching methods of diagnosis and treatment.

Hair Dyes and Hair Dyeing, by H. S. Redgrove and J. Bari-Woollss, second edition, 205 pages, Chemical Publishing Co., Inc., New York, $5.00.

Although changes in this second edition have been relatively slight, at least in the first part of the book devoted to the chemistry of hair dyes, this still remains the best book in English on the subject. An additional chapter is devoted to hair-brightening shampoos and rinses.

Colloidal Phenomena, by E. A. Hauser, 294 pages, McGraw-Hill Book Company, $3.00.

The intention of this book is to acquaint the reader, in as simple a manner as possible, with the modern viewpoints in colloidal science and to show where and why they must differ from those applied in physical chemistry. With the intention of making the book as understandable as possible, colloidal phenomena have been treated with out mathematics. Mathematical derivations are collected in the appendix, however, for those who prefer that type of treatment.

So You Want To Open A Shop, by Alissa Kier, 216 pp., Whittlesey House, New York, cloth, $2.00.

If you have ever had the idea to go into the retail business, this is a swell little book to read. If you may have found it difficult to obtain sufficient information to enable you to choose the enterprise in which you would be most likely to succeed, this book will help you because it contains detailed facts regarding the running of a shop and what to look for and look out for in choosing one. If you already have a shop it will also give you many points and ideas that will surely be helpful. Contents include: So You Want To Open A Shop—Tearoom—Gift Shop—Beauty Parlor—Bookshop—Flower Shop—Knit Shop—Dress Shop—Interior Decorator—Lingerie—Real Estate—Hat Shop—Index. And it's enjoyable reading too.

IF you package in tubes . . . if closure leakage is a problem you have not been able to lick . . . if "leaker" losses are costing you money . . . there is one thing to do, one remedy you can count on . . . and that is the Westite Closure.

The Westite Closure is leakproof . . . a seal stronger than the tube metal itself . . . a seal that will hold light, oily products which seep through some closures almost immediately . . . a seal that is permanently air-tight, that protects foods and other products against deterioration as well as prevents leakage losses.

A Westite Closure costs very little more, adds practically nothing to packaging cost, because the cost of preparing tubes is partially offset by the fact that less tube metal and no clips are required. The cost of the Closure is a very small percentage of the savings it effects . . . in eliminating soiled packages, product spoilage, tube corrosion, dealer dissatisfaction, returned goods and lost sales!

These are facts. Westite Closures have been in use long enough to prove them. We'll gladly seal samples of your product to demonstrate.

Your tube manufacturer can supply the precoated tubes needed . . . or we can now supply a machine with which you can prepare tubes as needed in your own plant.

Westite Closure mechanism can be adapted to Stokes Filling, Closing and Sealing Machines, and in some cases to other types of sealing machines.

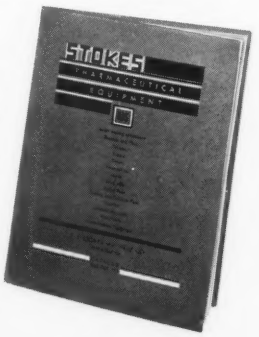
We suggest you investigate the Westite Closure.

F. J. STOKES MACHINE CO.

5932 Tabor Road Olney P.O. Philadelphia, Pa.

Representatives in New York, Chicago, Cincinnati, St. Louis
Pacific Coast Representative • L. H. Butcher Company, Inc.

Have you a copy of Stokes Pharmaceutical Equipment catalog No. 710? If not, ask for one. It shows our line of Tablet Machines, Mixers, Dryers, Granulators, Drug Mills, Coating and Polishing Pans and other modern equipment you should know about.



F.J.Stokes TABLET MACHINES PHARMACEUTICAL EQUIPMENT FJS Est. 1895

PRODUCTION FORUM

BY Francis Chilson
PRODUCTION ENGINEER

FORMULA WEIGHTS

One of the things in connection with pharmaceutical and cosmetic manufacture about which we have always wondered is the traditional method of running out formulas for large batches into ounces, drams, and even grains. This was brought to mind the other day in looking at a formula calling for 67 pounds, 14 drams, and 130 grains of bicarbonate of soda which was part of a formula measuring 1,000 gallons when completed. A fraction of an ounce or even a fraction of a pound in such an instance would have no effect whatever in the finished product, and, even though the constituent happened to be a narcotic or a poison, such minute quantities cannot be detected in the finished assay. It is not merely that the procedure of weighing out fractional quantities is ridiculous but it is very costly. In the first instance, since fractions of ounces or pounds require closely graduated scales, it sometimes takes as long to weigh out the fractional quantity as it does the total quantity of the particular ingredient. But the work does not end here.

In the manufacturing department the small quantities which usually are measured out in separate containers must be handled individually and checked in the same fashion. Finally, when the formula gets back to the accounting department for cost purposes, the job of breaking down a material which is purchased on a per pound basis into ounces, drams, and grains is obviously great and requires considerably more clerical expense than is warranted by such extreme accuracy.

This state of affairs comes about from the failure of chemists to build formulas for production purposes. They originate a formula in a quantity approximating a half pound and then because the individual ingredients which in some cases may be present in fractional percentages happen to extend out into grains, they simply multiply this basic formula by the amount required for the manufacturing batch to arrive at the total quantities. Even though these large quantities are extended out into fractions of ounces, the formula is permitted to stand this way.

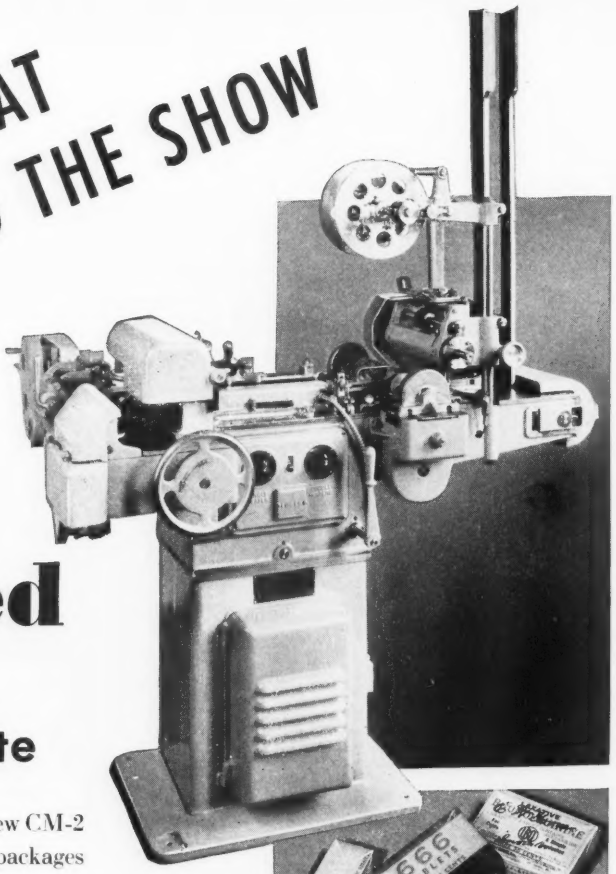
The sensible procedure is to ignore all such small quantities. When a formula is developed in a laboratory, it should be developed into a manufacturing formula so that the individual quantities will come as close as possible to a pound or in the case of some very powerful ingredients an ounce. When formulas are frequently changed in size, a base formula for twenty-five gallons should be set up and larger quantities should always be made in multiples of the twenty-five gallon batch. This would eliminate the fractional quantities which have no influence in the final product whatever and which cannot be detected by the most circumspect assay. A few of the more progressive plant men we know simply instruct their department heads to ignore the fractional quantities and they do this with the knowledge that if this were known by the control Laboratory there would be hell to pay.

This, of course, is an argument for the metric system which we hope to see in general use throughout the trade before we die.

U.S.P. REQUIREMENTS

In connection with the practices followed in the trade regarding weighing and measuring and in following the directions of the official Bible, the Pharmacopoeia, one of the most illogical practices is that of always interpreting Pharmacopoeia rulings literally.

THE MACHINE THAT STOPPED THE SHOW



New High Speed

Wraps up to 380 packages per minute

Demonstrated at the recent Packaging Show, our new CM-2 amazed onlookers by shooting out perfectly wrapped packages at the rate of ***380 per minute!***

As impressive as its high speed, however, is the machine's smooth, silent operation . . . striking evidence of sound construction and advanced design.

The CM-2 was specially built to wrap comparatively small packages, and is easily adjusted for the different sizes within its wide range. Uses plain, moisture-proof, or heat-sealing transparent cellulose in roll form. Rate of speed depends upon the size and nature of the package being wrapped—runs from around 250 to 380 per minute. The machine occupies very little floor space—3′ 6″ x 4′ 3¼″.

In performance and design, the CM-2 is a decided improvement over former machines used for the same type of work—yet it is priced considerably lower.

Today, *speed* is machinery's answer to the manufacturer's problem of rising costs—and for this reason the CM-2 fills a real need. You should certainly know more about this remarkable new machine, and the advantages and economies it offers. *Write for complete information.*

Quickly ADJUSTED for Different Size Packages

PACKAGE MACHINERY COMPANY - Springfield, Massachusetts

NEW YORK CHICAGO CLEVELAND LOS ANGELES

Mexico, D. F., Apartado 2303 Peterborough, England: Baker Perkins, Ltd.

Buenos Aires, Argentina: David H. Orton, Maipu 231 Melbourne, Australia: Baker Perkins, Pty., Ltd.

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

Although the Pharmacopoeia expressly gives considerable latitude to large scale manufacturers, and although the tolerances for official products are sufficiently wide to permit normal manufacturing variations, it is amazing how many people believe that unless you put into a tank precisely what the Pharmacopoeia directs in precisely the specified quantities, the resulting product will not be official.

For instance, in making certain official tinctures we observed in the plant of one of our friends a considerable loss from the time the product was manufactured to the time it was filled due to the evaporation of alcohol. Since the batch loss of five or six per cent. represented a considerable financial loss in handling each batch, we asked the plant chemist why he did not put in a little extra alcohol at the beginning to provide for the evaporation loss so that he would get into his bottles the full quantity originally called for by the formula. He was horrified to think that we would suggest such a heresy and contended that the product with the addition of more alcohol than was called for in the official Bible would not be U. S. P. We took the position that the U. S. P. is more interested in the quality of the finished product in the bottle than it is in the quantity of the product in the tank and that, therefore, if during the processing there was evaporation of alcohol, the product in the bottles was necessarily slightly stronger, hence, if what the chemist said was true about adding more alcohol, then it was only logical to assume that the presence of less alcohol would also make the product officially unacceptable.

When you consider that variations of one or two per cent. in a total batch cannot by any known method be detected, and since such variations come well within the tolerances allowed by the Pharmacopoeia, it is, in our opinion, ridiculous to assume that it is unethical to make some provision at the time the batch is made for evaporation and filtration losses. Ten gallons of water or alcohol added to a one thousand gallon batch will not affect the quality of the finished product one way or another. Products so made will conform to all official chemical and therapeutic tests. And the point of the method is of course that by guarding against processing losses through minor additions in the beginning of operations, a considerable reduction is made in operating costs. In some quarters the Pharmacopoeia is regarded as a sacred fetish and if it is suggested that the alcohol for a certain product should be poured into the tank from a brass gaboon, many of the chemists in the trade would insist upon the use of a brass gaboon exclusively.

PHARMACEUTICAL TRAINING

One of the remarkable things in this industry is the lack of adequate financial support which it gives to pharmacy schools throughout the country and the lack of adequate training which the pharmacy schools provide for their graduates. I don't know whether the latter is a cause of the former, or a consequence of it. But one thing is certain, pharmacy schools generally have too long emphasized the drug store point of view and have, and are still, turning out too many soda jerkers. The pharmacy schools of the country, while in general they are making some effort to do it, are simply not turning out men fully equipped to work in the manufacturing branch of the industry as control or research chemists or production men. They have better luck turning out chemists and pharmacists than production men.

As to straight pharmaceutical training, it must be admitted that it does not rank very high in the manufacturing trade. As a consequence manufacturing pharmacists are employing out and out chemists who don't know anything about pharmacy. But by doing this they get men who have no preconceived ideas, who have inherited no traditions, and who lack the viewpoint of the prescription counter or the soda water counter which is inculcated in men trained in pharmacy in the usual way. When a pharmaceutical manufacturer employs either a chemist or a pharmacist, he has to invest quite a bit of money training him before he becomes worth anything to his employer. As for plant men, no pharmacy graduate is worth a hoot for a long time because he has practically to be rebuilt from the ground up.

There is no reason at all why the study of pharmacy should not be separated into two divisions so that the boys who elect to go into the manufacturing branch of the business could be given extensive and specific training, while the boys who elect to sell hot water bottles and alarm clocks can go in strongly for the retail angle. To train men properly for manufacturing purposes requires a larger investment in equipment than the average pharmacy school can make. Therefore, it appears that the manufacturers of the trade should do more toward providing equipment with which extensive training can be given prospective candidates for the manufacturing industry. In certain branches of engineering progressive schools like the University of Cincinnati have established six year courses, part of which must actually be spent in industry before a degree is secured. There is a great deal to be said for this method because it does turn out well trained men who are useful to their prospective employers from the moment they begin full time work. From the standpoint of practical economics it would be cheaper in the long run for manufacturing enterprises (liberally) to support properly equipped pharmacy schools because the men they would get from them would be of much greater value.

MAN WANTED

A drug manufacturing and wholesale concern in the south is looking for a young man to act as a general assistant to the head of the company. The job will pay about $2500 a year and the man is expected to know something about production, office routine, shipping, buying, etc. This is a small and rapidly growing business headed by a hard-hitting wild Scotsman. The

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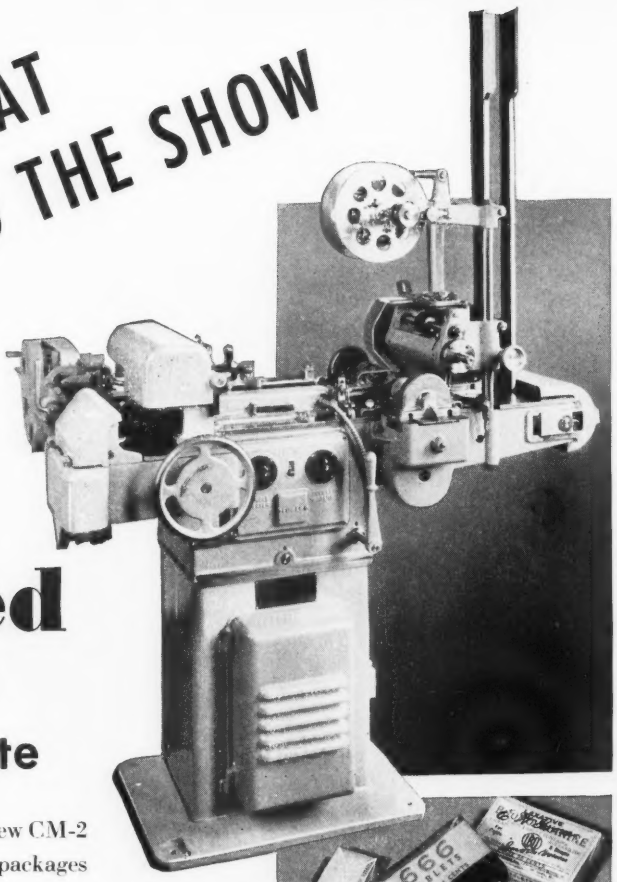

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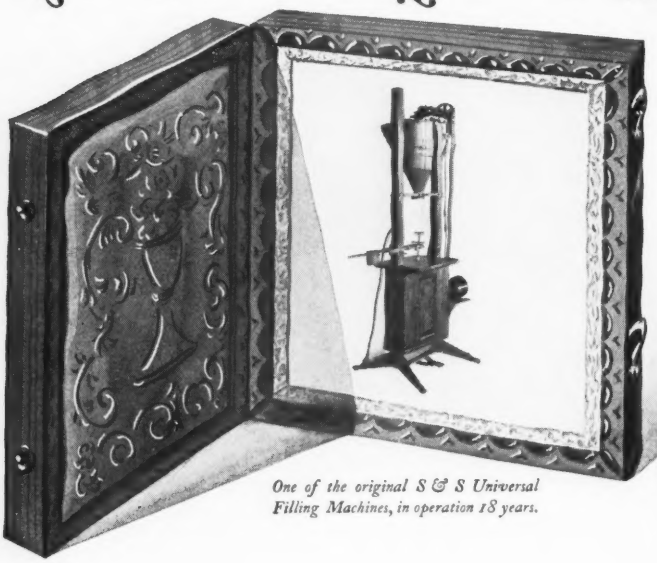
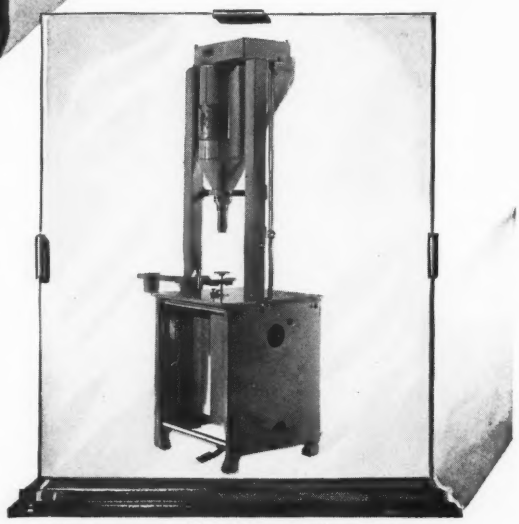
naphot$ From the Family Album



One of the original S & S Universal Filling Machines, in operation 18 years.

"I'm his Great Great Grandfather and still going strong. But by heck, I'll have to admit that young upstart already knows more tricks than I ever did."

"Don't mind Grandpa. He was an ace in his day and he can still do a good day's work. If I'm more modern and efficient than he—well, that's just a sign of the times. Get to know me, I'd like to show you my bag of up-to-date tricks."



The latest model S & S Universal Filling Machine.

Yes, modern manufacturing methods demand modern machinery. And it is the everlasting aim of Stokes & Smith Company to develop the finest in packaging machinery. The results of their efforts are at your disposal—ready to profitably serve you, as they have long served many industries.

FILLING MACHINERY—CARTON FILLING AND SEALING MACHINERY—TIGHT WRAPPING MACHINES—TRANS-WRAP CELLOPHANE PACKAGING MACHINES. SPEEDS TO SUIT YOUR NEEDS—15-30-60-120 PER MINUTE.

STOKES & SMITH Co

PACKAGING MACHINERY — PAPER BOX MACHINERY

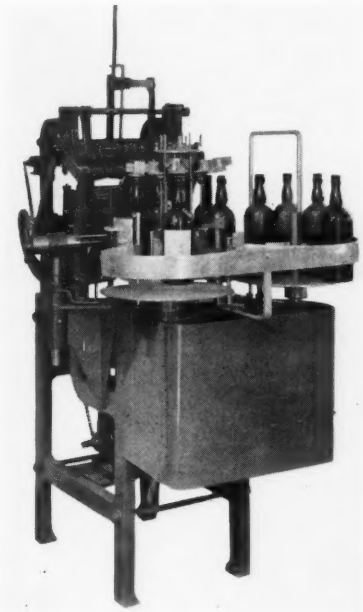
4912 Summerdale Ave., Philadelphia, U. S. A.

gentleman at the head of this concern happens to be a friend of mine and he needs a man who can be developed eventually into the position of General Manager.

LABELING MACHINE

The Biner labeler made by the Harvey Machine Company, 6200 Avalon Boulevard, Los Angeles, California, is an interesting development in the labeling machine field. The base of the machine is semi-automatic and it can be made fully automatic for an additional five hundred dollars for the necessary parts. It is said to be capable of handling labels from 1½" x 1½" up to 5" x 5". Moreover, it is further claimed that the machine is adjustable from quart sizes all the way down. Special attachments can be obtained for half gallons and gallons. The speed of the semi-automatic model runs from 35 to 40 containers per minute and it will handle any kind of label stock, whether varnished or not, and also foil and metal labels. There is no limitation on bottle shapes.

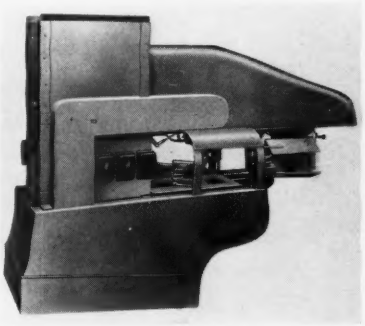
An interesting feature is that this machine, unlike other semi-automatic machines of which we have knowledge, is provided with two air operated pressure heads which serve to compress the labels to the contours of the bottles very firmly. The base price of the machine is about the same as any of the semi-automatic



labelers. While we have seen none of these machines in operation, there are certain features of this machine which appeal to us.

CASE SETTER UPPER

J. L. Ferguson Company, Joilet, Ill., has just turned out a new packaging machine known as the Packomatic Commander, said to be the Rolls Royce of case handling machines and is streamlined to substantiate this point of view. The side view of this machine as you can see resembles a sharp modernistic profile by Picasso. As a matter of fact, when you look at it objectively, the machine looks a little bit like Bald Headed Pete Bowley in profile although such a comparison is pretty hard on the machine. The purpose of the machine is to take knock down containers such as solid fibre single or double corrugated from a magazine and set them up in



a position for the packers to fill them. This machine will certainly prove a great help to manufacturers who have a great many cases to handle during the course of a day. It is, of course, adjustable and is very ruggedly built.

CORRECTION

The March issue of this department made a blunder which should be corrected and for which we apologize to the Abbe Engineering Company. In describing their new redesigned cutter for use in grinding crude drugs and the like we said that it was "equipped without ball bearings." This should have read "equipped with outboard ball bearings or roller bearings."

INSPECTION LAMPS

Your attention is called to the fluorescent daylight reflector units made by the Miller Company of Meriden, Connecticut. These units are particularly useful on bottling lines for inspection purposes. Through their use the operator can readily see chips or other foreign matter in the containers, even though the glass is blue or amber. Several different models are available.

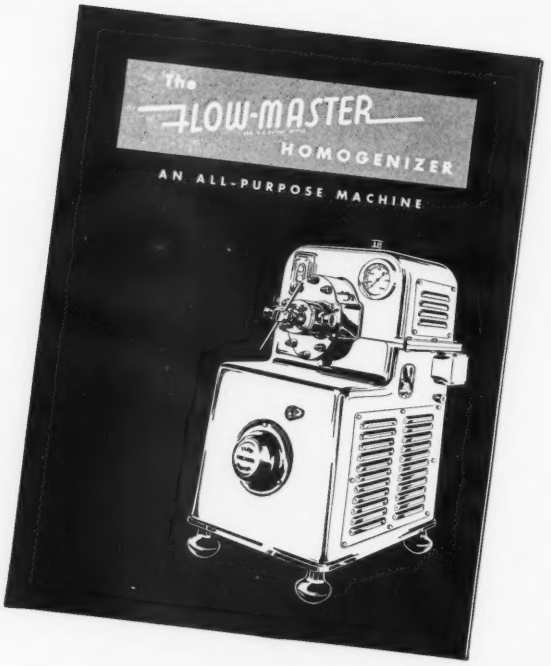
STREAMLINED WEIGHER

Encased in an attractive streamlined metal sheath, a new Waytrol electric continuous vibrating feeder and weighing mechanism has been introduced by the Jeffrey-Traylor division of the Jeffrey Manufacturing Company, Columbus, O. The device incorporates an electric vibrating feeder, synchronized to a continuous weigh belt, in an enclosed dust-proof case, the only opening of which is a window to view the calibration on the weighing conveyor scale.

A continuous flow of materials is accomplished by the electrical vibrating feeder, with the amplitude of the

Everyone said it couldn't be done
But he with a chuckle replied
That maybe it couldn't, but he would be one
Who wouldn't say so 'till he tried.
So he pitched right in with a trace of a grin
On his face. If he worried, he hid it
And he tackled the thing that couldn't be done
And he did it!

—*Anonymous.*



Helping Solve Manufacturing Problems in the Drug and Cosmetic Field . . .

is part of the service of this organization. This service costs you nothing, if you are an established manufacturer. It is our way of introducing a new type of homogenizer to the drug and cosmetic field.

You may have a problem in manufacturing that has troubled you for years — you may have reached the conclusion that what you are trying to accomplish is a physical impossibility, just as others have done.

Send that problem to us — if we accomplish the seemingly impossible and are able to help you solve your problem, you'll surely be interested in our equipment, or —

Maybe your present manufacturing methods are too expensive — again we will be glad to help you.

Because of an entirely new principle applied to the process of homogenization, we can accomplish at 750 lbs. pressure what requires a great deal more pressure when using other type homogenizing equipment.

The Flow-Master Homogenizer

The Flow-Master Homogenizer possesses unusual merits, and has a wide adaption in the process industries; such as chemical, food, dairy, petroleum, etc.

Our Research Department has worked out many problems for various manufacturers, in connection with the above lines. A few of the accomplishments are listed below.

●

Stabilized Peanut Butter.

Making all types of emulsions; paraffin, wax, asphalt. Fruit Puree, in some products using skin and seeds.

Mustard, Mayonnaise, Salad Dressings.

Emulsifying condense with Cocoanut Oil.

Improving fudge texture, fondant creams, and a great many other confectionery products.

Pharmaceutical Products consisting of tonics, ointments, lotions, etc.

●

These and a host of other problems have gone through our laboratory in the past months under the supervision of our Research Staff.

We will welcome hearing from you.

Flow-Master Advantages

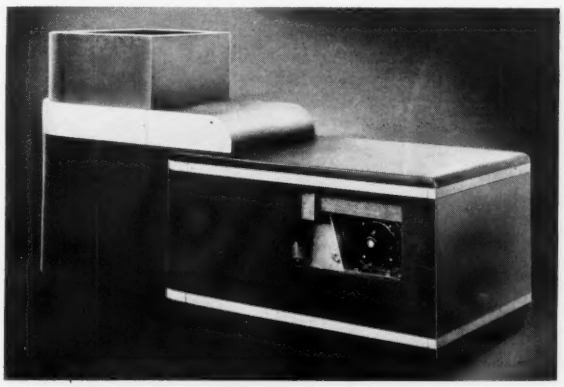
1. An all-purpose machine — homogenizing all products efficiently.
2. Compact. Size 34-inches high, 27-inches long, 19-inches wide. (200 to 500 gals.) Feet adjustable to floor unevenness.
3. Low first cost. Low operating cost. Low maintenance cost.
4. The only machine equipped with automatic compensator wear control, insuring high volumetric efficiency.
5. Hydraulically balanced twin rotors.
6. Side compensator adjustment.
7. Variable valve control.
8. Self-adjusting compensating seals which can be cleaned or discarded daily at minimum cost.
9. Auxiliary synchronized drive to reduce wear on rotors.
10. Gauge diaphragm made integral with body of pump.
11. Gauge does not need to be taken apart for cleaning.
12. All special alloy stainless steel rotors and shaft.
13. Finest precision roller bearings.
14. All driving members operate continuously in bath of oil.
15. Only fourteen parts to be cleaned.
16. All parts are removed, cleaned and reassembled in less than thirty minutes.
17. Non-pulsating, smooth delivery.
18. Every part of entire machine easily accessible for cleaning or inspection.
19. No threads of any kind in contact with products being homogenized.

THE MARCO CO., INC.

5325 Westminster Ave. Philadelphia, Penna.

feeder stroke accurately regulated by a continuous belt conveyor over which the material moves. The conveyor itself is one arm of a weighing scale. Too much or too little material instantly causes the vibrating feeder to speed up or slow down under direction of an electrical "brain."

The feeder will deliver a uniform flow of materials at hourly rates from a few pounds to 100 tons. It is applicable in handling reagents, such as alum, activated carbon, hydrated lime or soda ash, in a municipal water system, or in feeding materials to reduction machines, feeding ore to a ball mill, feeding cosmetics to a pulverizer, chemicals, food stuffs, belts, elevators, and in many other ways, such as continuous proportioning of several materials. By eliminating feed surges, the machine operates with less power cost, and, it is said, in certain instances, it will increase capacities up to 60 per cent.



MEN WANTED

For a client not connected with the drug industry, I am looking for a man as superintendent of the packaging department. This job requires a man who is production-minded. He must be accustomed to handling a great many people. He must be familiar with turning out production in very large quantities. He will have to be under forty, intelligent, energetic, and aggressive. Preferably he should be an engineering graduate but the lack of a college education will not be considered a disqualification.

ERTEL FILTER

Ertel Engineering Corp. has just put on the market a new bench model filter known as its model EBW. Sturdier in its construction than its former model, it has a hand wheel instead of bolts and nuts, which permits the loading of the asbestos filter sheets into the filter by simply turning the wheel, a great time and energy saver. This unit is equipped with a silent pump delivering three gallons a minute and the pump can be used as a transfer pump when not filtering. Furnished in nickel-plated bronze or hand rubber, the filtering area can be readily increased by adding two or four extra rings.

PAPER SHREDDER

More and more people are coming over to the idea of using waste paper gathered throughout the plant to replace excelsior in the packing room. Shredding waste paper affords a means of getting rid of waste material which under normal circumstances requires an expenditure for baling purposes and at the same time provides a substitute for dusty excelsior. The photograph shows the streamlined unit now offered by Mitts and Merrill, Saginaw, Michigan. One feature of this machine is that the width of the paper shredded can be adjusted very quickly. It requires a comparatively small amount of power and has been used in quite a few companies already.

MEASURING LIQUIDS

To T. R. McCrea of Rahway, N. J., we are indebted for the following formula for measuring the volume of liquids at variable depths in tanks. The formula is stated for upright cylindrical tanks and also for rectangular tanks. We have not checked Mr. McCrea's figures.

Upright Cylindrical Tank—D^2 (in.) x .0034=Gallons per inch.
D^2 (in.) x .01288=Liters per inch.

Rectangular Tanks—Area in $(in.)^2$ x .004239=Gallons per inch.
Area in $(in.)^2$ x .0164=Liters per inch.

HIGH VACUUM GAUGE

A new McLeod type gauge has just been placed on the market by the F. J. Stokes Machine Co., Philadelphia. In this new instrument the well-known McLeod principle has been utilized in a portable gauge that can be safely carried about without danger of breakage or spilling the mercury, no matter in what position the gauge may be held or how rapidly that position may be changed.

With this new Stokes gauge a single reading is taken in from two to five seconds and continuous readings are made in rapid succession simply by turning the gauge from a horizontal (evacuated) position to a vertical (reading) position. Readings are made, in microns, from the center capillary. The mercury always comes

IN THE PROCESSING PICTURE

WHEREVER PRODUCTION STANDARDS ARE HIGH . . . .

ROSS Air Systems

HIGH–MEDIUM–LOW TEMPERATURES

0 UP TO 1000

DEGREES FAHRENHEIT

Whatever the requirements for AIR --- Baking, Drying, Conditioning, Refrigeration, Chilling, Dehumidification --- a Ross pure air system will assure greater uniformity of production from a standpoint of both quality and quantity.

In many prominent plants, the reduction in losses due to spoilage alone has demonstrated that Ross Air Systems prove paying investments. They embody more than 25 years of specialized experience. What's your problem?

J. O. ROSS ENGINEERING CORPORATION

Main Office — 350 MADISON AVE., New York, N. Y.

201 North Wells St.
CHICAGO, ILL.

12953 Greeley Ave.
DETROIT, MICH.

2860 N. W. Front Ave.
PORTLAND, ORE.

ROSS ENGINEERING OF CANADA, LIMITED, Dominion Square Building, Montreal

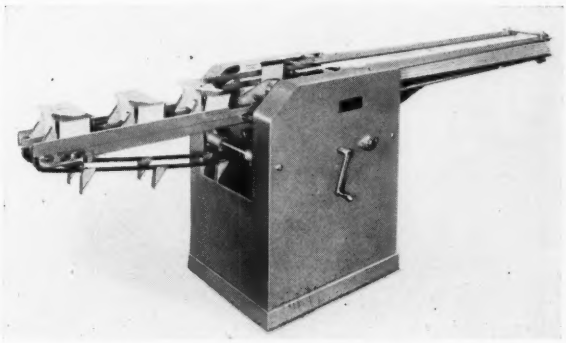
up, immediately and automatically, to the proper level in the right capillary tube, irrespective of the reading and readings are thus made fast enough to obtain the almost continuous record of vacuum that is advantageous in many processing and vacuum operations.

The Stokes gauge is rugged and compact, weighs only 4½ pounds with mercury, measures 7″ x 11″ x 2″, and tubing is of extra-heavy Pyrex glass, annealed to remove internal strains. Speed of the mercury in its flow through the tubing when the gauge is rotated from one position to another is limited by a constriction in the tubing, so located that there can be no "hammering" action by the mercury at any point. A trap in the tubing is provided so that mercury cannot spill out, and a glass plug is provided to facilitate removal of the mercury should it become necessary to clean it.

The gauge covers the entire range of pressures met with in high vacuum practice, from 0 to 5000 microns (5mm.), is provided with a swivel bracket for mounting in permanent position. Stops are provided and the swivel is so balanced that the gauge returns of its own accord to the horizontal or evacuated position when released.

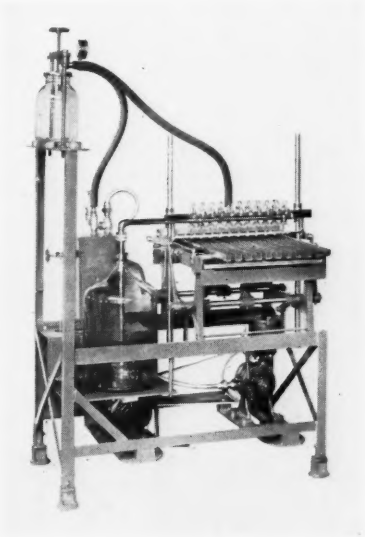
CARTON GLUE SEALER

The Container Equipment Corp., 204 Riverside Ave., Newark, N. J., announces an automatic carton glue sealing machine. The machine is adjustable and is available in three sizes; each of which will handle a range of carton sizes of considerable difference in dimensions. The machine operates as follows: The filled cartons are placed on the feeding conveyor with the inside flaps tucked in. Two sets of hands attached to two roller chains move the cartons with the outside flaps extended horizontally through the glue rollers, folding the flaps and feeding them through two compression belts. Instead of gluing the outside and inside flaps separately, the unprinted outside flaps are fed between two glue rollers which apply adhesive to both sides. A mechanical folder folds the glued flaps in a sealed position while the outside printed flaps are folded by adjustable plows. Size adjustments are made by means of hand cranks. It is claimed that this machine will seal from thirty to sixty cartons per minute with one operator.



VACUUM FILLER

A new development in straight-line vacuum fillers has been announced by the U. S. Bottlers Machinery Co., Chicago. The average filling speed of these machines ranges from fifty to sixty containers per minute. The machine is suitable for filling small bottles such as nail polish. The vacuum principle enables each container to be filled to the same hairline register, a fact



which should appeal to cosmetic manufacturers particularly.

The picture shows the discharge end of the filler. The machine uses the actual storage jug in which the product is handled by filling direct from it. Overflow is trapped and stored in the vacuum chamber which is really a one gallon glass jug which serves as a vacuum cylinder and a storage chamber for overflow. The one gallon jug can be removed from the machine and capped after the filling job is finished and the product can thus be stored indefinitely. In this way no contamination by color, odor, etc., can occur. The machine is easy to clean, semi-automatic in operation, and automatic as far as the filling operation is concerned. One operator is required to load the machine.

TYING MACHINE

The Harvey Machine Company which makes the bottle labeling machine mentioned elsewhere in this department also makes an ingenious machine for tying shipping cases with wire. An operator places the case in position and depresses a foot pedal. The machine then automatically takes wire from a wheel, wraps it around the case with sufficient tension, and then twists the ends into a tie, cutting off the ends and reloading the wire for the next operator. With this apparatus one man can handle several cases a minute.

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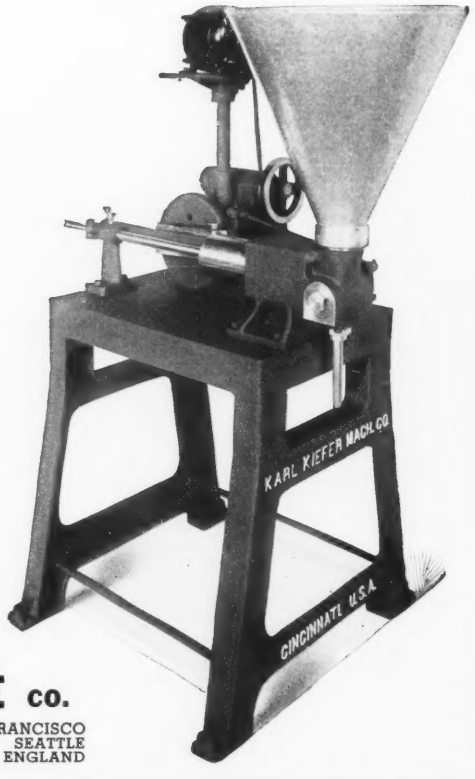

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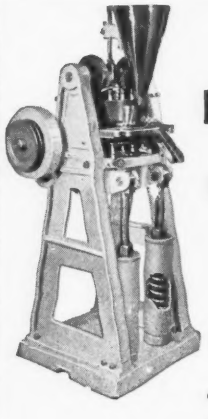

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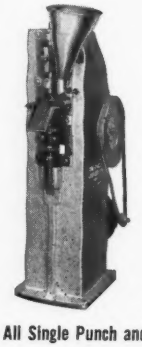

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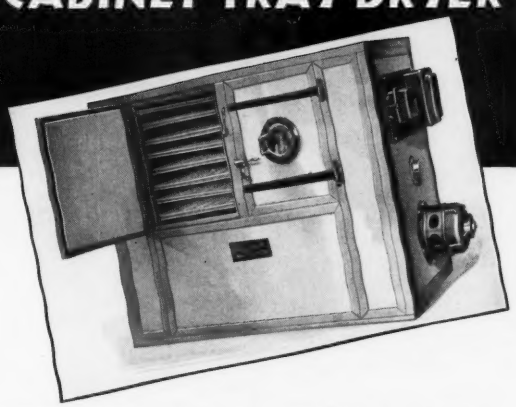

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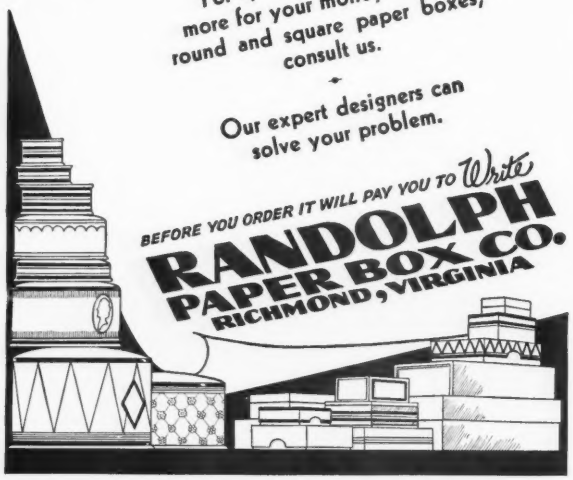

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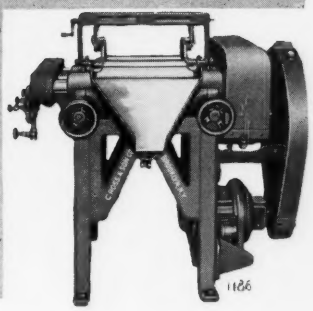

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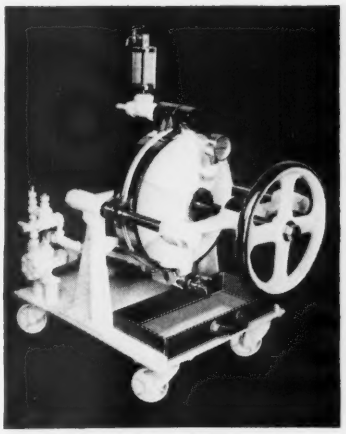

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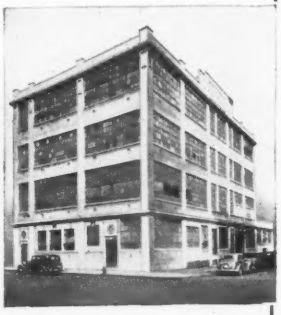

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The COMPOUNDER'S CORNER

Our April Cartoon

The cartoon which appeared on this page in our April issue was not intended to refer to any existing product, and no intention was meant to cast reflections upon any product being sold. The cartoon clearly referred to products for feminine hygiene. And the idea behind it was that manufacturers of feminine hygiene products do receive complaints due principally to the fact that the products are not always properly used.

CASTOR OIL

Castor oil is extracted in large quantities from the seeds of the castor oil plant which is grown chiefly in India. About 48 to 50 per cent. of the oil is present in the plant and about 40 per cent. of this amount can be extracted. The oil is obtained either by pressing or solvent extraction. Refining as applied to castor oil is generally carried out by passing steam into the oil.

A good grade of castor oil should have the following characteristics: color, clear, pale straw; specific gravity 0.960-0.968 at 60° F.; viscosity at 212° F. 95-98 seconds; iodine number 82-86; saponification number 178-182; flash point 525-545° C.; solubility, complete in 2 volumes of 90 per cent. alcohol; less than 0.5 per cent. unsaponifiable matter; freezing point below 0° F.

Castor oil is a non-drying oil; on exposure to the air it does not increase appreciably in acidity nor does the iodine value decrease. The oil is characterized by consisting almost wholly of a glyceride of ricinoleic acid. Small amounts of stearin and olein are also present. It is readily soluble in 90 per cent. alcohol and miscible in all proportions with absolute alcohol or glacial acetic acid. It is almost insoluble in hydrocarbon oils and ether.

To the perfumer castor oil has a special significance since, beside its limited application as a fixative, it is the source of a number of valuable perfume materials.

Direct destructive distillation of castor oil leads to the formation of about 12 per cent. of heptaldehyde, along with the glyceride of undecylenic acid. This glyceride may be further broken down to heptaldehyde and acrolein. Sodium ricinoleate undergoes similar decomposition when heated under reduced pressure, producing methyl hexyl ketone, secondary octyl alcohol and acrolein. Acrolein must be very carefully removed because of its strong, irritating odor.

Heptaldehyde itself is the starting point in the production of heptoic acid, heptyl alcohol, amyl cinnamic aldehyde, and a large number of other esters of great interest in perfumery. Chlorination of the aldehyde to dichloroheptane leads to the preparation of methyl heptine carbonate, while condensation with benzaldehyde

"I don't think Mr. Whalen would mind if we called the combination the Perisphere Laxative Pill and the Trylon Suppository—made by Dinkelpopper Company, the Theme Center of the Laxatives of Tomorrow."

B-W LANOLIN U.S.P.

BEST BY TEST

Highest in Cholesterol Content

15.25%

B-W Lanolin puts into your cream that which gives the skin that smooth, soft velvety feeling as nothing else does.

B-W Lanolin will never cause your cream to darken in color with age.

HYDROPHIL — The Modern Absorption Base

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MANUFACTURERS OF QUALITY RAW MATERIALS FOR PERFUMERY FOR OVER 100 YEARS

give amyl cinnamic aldehyde, synthetic jasmin.

Undecylenic acid, when treated with sulfuric acid, gives gamma undecalactone, with a peach odor.

Castor oil finds even more extensive use after it has been sulfonated. It should be light in color, perfectly stable, and quite soluble in water. Aside from large-scale textile use, it finds application in the production of various soaps and soapless shampoos, in many toilet creams, etc. *H. Silman, Manuf. Chemist.*

PERSPIRATION

About 2,000,000 sweat glands are present in the body surface. There are two types of these secretory glands, namely, the eccrine or small coil glands, and the apocrine or large coil glands.

The eccrine glands are the true sweat glands which occur all over the body. They secrete only water and water-soluble substances and secretions contain no cell substances. The apocrine glands, on the other hand, are connected with the hair follicle and are found in only a few places. They are generally limited to the underarm, breasts, and genital regions. These glands secrete nitrogenous and fatty substances in addition to water and salt and contain portions of the inner cell layer. They are actually secondary sexual characteristics and develop at puberty, are more highly developed in females than in males, and probably undergo cyclical changes in activity, corresponding to the menstrual cycle.

The sweat glands are largely concerned in the regulation of body temperature, evaporation of their contents leading to a loss of heat. In a normally healthy person this is automatic, unless the surrounding atmosphere is hot or very moist, when evaporation may be insufficient to prevent sharp rise of body temperature. Their function is complementary to that of the kidneys, and they probably also assist in maintaining the elasticity of the skin and have a bactericidal effect.

Sweat or perspiration is a colorless, opalescent fluid having a peculiar but not necessarily unpleasant odor. As secreted it is slightly acid, and rapidly becomes mixed with the fatty secretions of the sebaceous glands and the appocrine glands. Bacterial decomposition takes place under the favorable conditions of moist heat and the decomposed fatty acids and their by-products of fermentation are responsible for unpleasant perspiration odor.

Sweat contains nitrogenous compounds, salts, fats and decomposed fatty acids, sterols, cellular nuclei, debris, and lymphoidal cells. Under normal conditions 600 to 700 cc. of sweat are evaporated from the skin in twenty-four hours, although this amount may be greatly increased by exercise.

The following table, by B. A. McSwiney, in "Lancet," gives the average values calculated from the examination of fourteen male and ten female specimens of sweat.

Milligrams per 100 cc.

	pH	*Ammoniacal Nitrogen*	*Urea*
Female.....	6.57	6.0	19.23
Male.....	6.14	4.7	21.44

	Amino Acid Nitrogen	*Glucose*	*NaCl per 1000 cc.*
Female.	6.5	20.0	3.0
Male...	5.0	12.6	3.7

The secretion of perspiration is under the control of the nervous system, the sweat glands being innervated by sympathetic fibers, and the nervous mechanism can be called into action by central stimuli, reflex action of peripheral stimuli. Recent work suggests that the impulses are chemically transmitted by acetylcholine liberated at the nerve endings and acting on sweat glands.

Disorders of sweat glands may take the form of hyperidrosis, excessive secretion, or anidrosis, deficient or no secretion. The latter condition is rare and requires medical treatment.

Hyperidrosis may be local or general. When general, it may be caused by exposure to excessive heat, exertion, fever, or the action of certain drugs. Internal treatment of this condition is useless and dangerous and only local measures should be undertaken. Astringent preparations of various types are used for the purpose and effectively stop perspiration. The stoppage of perspiration over a small area has no effect whatever on body health, since compensation takes place, where necessary, by increased secretion elsewhere. *Ralph G. Harry, Manufacturing Perfumer.*

PHENOL ANTISEPTICS

The use of phenols for general disinfection purposes is well known, and it is not surprising that curiosity has been aroused concerning the relative efficiency of different members of the family. It has been found, roughly, that activity increases and toxicity decreases as the molecular weight increases—as the homologous series is ascended: the cresols are approximately two and a-half times as active as phenol, while with thymol the figure reaches 25. Many careful studies have been directed towards obtaining more systematic knowledge, and generally a peak of activity is encountered with one individual. For instance, in a series of phenols substituted in the *para* position with different alkyl groups and a similar series of substituted *m*-cresol, this peak occurs with the amyl derivatives, and the cresol derivatives are always more active than the corresponding phenols. The activity of 4-*n*-amyl-*m*-cresol is 280 times that of phenol, and the compound has about half the toxicity of resorcinol, which itself possesses a phenol coefficient of about 50. It is not always possible to take full advantage of these high activities, as the solubility of the substances decreases with increase of molecular weight.

Recently attention has been turned towards the chloro-derivatives of cresols and xylenols. Systematic examination of series of these chloro-derivatives revealed the fact that they were always more active than the parent phenol even though the chlorine atom in such combinations is relatively inert. Again a peak of activity occurred with the butyl or amyl member. *m*-Cresol chlorinated in the position *para* to the hydroxyl group possessed an activity of about 37, whilst the corresponding chloro-derivative of thymol reaches a figure of 160. There appears to be some evidence in this field of a curious anomaly; it is said that a mixture of chlorocresol and a chloroxylenol possesses an activity greater than can be accounted for by the respective activities of the components. *Pharm. J.*

SUN SCREEN PATENT

A medium which protects the skin from noxious rays of ultraviolet light without excluding tanning rays contains as the light-absorbing reagent sodium phenylbenzimidazole sulfonate or other practically colorless, nonpoisonous organic substance which has a high and simultaneously steep slope of the absorption curve toward the shorter wave-length in the range between about 320 and 350 mμ, the slope corresponding to an increase of the logarithm of the molar extinction coefficient by at least 1 within a range of 10 mμ, so that at least the value 3.2 is reached.—*Erich Merkel and Christian Wiegand, assignors to Winthrop Chemical Co. U. S. pat. 2,104,492.*

VITAMINS IN OPHTHALMOLOGY

Laval suggests that in certain ophthalmologic conditions in which deficiencies of vitamins exist it might be theoretically valuable to prescribe the following treatment: 1. A tablespoonful of cod liver oil twice daily should be prescribed in cases of poor dark adaptation, phlyctenular keratoconjunctivitis, photophobia and low grade conjunctivitis in women who are on a slenderizing diet or in cases of other corneal and conjunctival lesions in which the history shows a deficiency of vitamin A. 2. In cases of incipient cataract, optic neuritis, retrobulbar neuritis and also toxic amblyopia vitamin B (B_1 and B_2) may be prescribed. This could be taken daily in the form of eight tablets of brewers' yeast or in the powdered form. 3. The juice of at least two large oranges or one grapefruit daily can be ordered in cases of incipient cataract. (This is plus the brewers' yeast, which is also to be taken daily.) In cases of intraocular hemorrhage the juice of four lemons daily is suggested. *Am. J. Ophth. vol. 22, p. 33.*

Perfumers Shelf

MARIGOLD

Marigold flowers possess an aromatic oil reminiscent of a mixed note of hyacinth, petitgrain and bois-de-rose, predominated by a lavender tone and possessing a sweetness resembling the lilac and tuberose notes. The latter sweet tone of the flower oil does not last long, and what finally predominates on a testing slip is a characteristic lavender tone, backed up by a mixture of champaca, phenylacetaldehyde and other notes.

The flowers of marigold are not very rich in their aromatic content, which varies between 0.3 to about 0.68 per cent. The largest and the purest yield of essential oil is obtained from flowers growing in the months of December and January, because of less evaporation and no important climatic effects due to the comparatively low temperature of these months.

The oil is a bright-yellow liquid with a characteristic flowery aroma and absorbs oxygen when exposed to the atmosphere. This atmospheric oxygen and moisture are responsible for the polymerization of the oil even at ordinary temperatures, and this process becomes accelerated at higher temperatures.

Various workers have attempted to analyze this essential oil, and the following const'tuents have been announced to be present therein:

Ocimene 20-30 per cent., d-Limonene 3 per cent., Linalol 5-10 per cent., and Citronellol 2-3 per cent.

Jones and Smith have found 5-10 per cent. and 50-60 per cent. of two hitherto unrecorded ketones, besides 30 per cent. of Ocimene and 3 per cent. of d-Limonene. Traces of Carvone, Linalyl acetate and a phenol are also reported. To these ketones, they have given the name of Tagetone.

This Tagetone is held responsible for the characteristic odor of the flower and is reported to absorb oxygen very readily and thus polymerize. The very high content of ketones in the oil should easily explain the highly unstable nature of the same and the difficulty which a manufacturer has to overcome in preparing a true marigold oil.

Poucher has remarked that "the oil has an intense cloying odor." Elsewhere, the very great potency of oil has been described by him in the following words: "Experiments showed that compounds containing 1 or 2 parts of the oil per thousand soon developed the Taget note and this was distinctly evident when the compound was used to perfume a face powder. The results indicated the use of the oil, about 1 in 10,000, as a possible blender for perfumes of the Gardenia type."

The aroma of the flowers is rich in its lavender tonality, which points to its immense use as a modifier for bay rum perfumes, as a blender and toner in lavender water compounds, lavender soap compounds and other preparations of a lavender type, as a blender for violet soap compounds in combination with ionones and clary sage, etc., as a toner for heliotrope perfume oils, cheap jasmin oils, and for

"Yeah, and I know where babies come from—perfume bottles."

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LILY No. 12—We recommend this perfume oil to the manufacturer faced with the problem of producing a really good quality of product at moderate cost. LILY No. 12 is ideal for that purpose. It develops a fine, lasting, lily character especially suited to creams, lotions and powders.

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perfumes of the types of fougère and chypre, as a modifier for gardenia and sweet pea perfumes, etc. The incorporation of this essential oil and attar in soaps in their first milling stage covers up and entirely removes the effects of rancidity due to bad oil stocks used in the soaps. This latter observation points out its very important use for covering the rancid aroma of soaps, especially made out of vegetable oils and fats.

The following hints may serve as useful guides for the use of marigold oils in various perfume products.

Bases: Benzyl Benzoate containing 5-7 per cent. of Coumarin, Diethyl Phthalate containing 2 per cent. of heliotropin + 1-3 per cent. of Vanillin and 2-3 per cent. of Coumarin. In both these cases it is essential to add 15-20 per cent. of 50% solution of marigold oil of attar.

Modifiers: Bois de Rose, Bergamot, Terpinyl Isobutyrate, Benzyl Salicylate, Benzyl Acetate, Benzyl Acetate over Jasmin, Geraniol, Geraniol Rose, Terpineol Rose, Ylang-Ylang, Phenyl Ethyl Acetate, Linalyl Acetate, Geranyl Anthranilate, Tuberose, Kewda 100%, Rhodinol Rose, Linalol and Linalyl Formate.

Toning Agents: Dimethyl Anthranilate, Wardia, Exaltolide, Tonkarine, Vert de Lilas, Vert de Violette, Rosemary oil, Lavender, Santalol, Rhodinol extra.

Fixatives: Oakmoss, Musk Amber, Orris, Sandal Resinoid, Lavender Resinoid, Ambrolione, Patchouli. *Sadgopal, S.P.C.*

SYNTHETIC AROMATICS

Among perfumes isolated exclusively from vegetable raw materials (such as essential oils) are terpineol (from oil of turpentine or pine oil) or terpin hydrate, geraniol (from citronella oil and palmarosa oil), citronellol (from geranium oil, citronella oil or citral), citral (from lemongrass oil), heliotropin (from isosafrol or sassafras oil or camphor oil), ionone (from citral or lemongrass oil), eugenol (from clove oil), linalool (from linaloe oil, geranium oil, schiu oil), carvone (from caraway oil), bornyl acetate (from Siberian pine-needle oil), eucalyptol (from eucalyptus oil), santalol (from sandalwood oil).

On the other side, coaltar products are the starting point of phenyl ethyl alcohol, acetophenone, methyl salicylate, cinnamic aldehyde, coumarin, indole, *p*-cresol methyl ether, thymol, to some extent also menthol, vanillin and anisaldehyde.

Nearly all the odorus substances here mentioned were first encountered in nature—with a few exceptions such as citronellol and ionone—before being prepared on the large scale by synthetic or semi-synthetic methods. In addition there is still another class of perfumes that do not occur at all in nature and are made exclusively by synthetic or semi-synthetic methods. They include benzophenone, musk ambrette, musk xylene and musk ketone, diphenylmethane, diphenyl ether, beta-naphthol methyl and ethyl ethers, bromstyrol, alpha-amyl cinnamic aldehyde, amyl salicylate and citronellal hydrate.

The marked development of synthetic perfumes during the last decade has been slowing down during the past few years judging by the relatively small number of new odorus compounds discovered. Among the achievements of recent times are the synthesis of alpha-amyl cinnamic aldehyde (by condensation of oenanthol with benzaldehyde), a perfume in extensive use owing to its strong and highly persistent jasmine odor; of jasmone, the natural jasmine perfume from the oil of Jasminum grandiflorum; of isojasmone and related compounds; all the large ring ketones with musk and civet odors such as cyclopentadecanone (exaltone) and cycloheptadecanone (dihydrocivetone); also the large ring lactones likewise possessing a musk odor, the lactone of hexadecene-7-ol-16-acid-1 (ambrettolide) and of pentadecanol-15-acid-1 (exaltolide).

Great importance has been acquired by the higher aldehydes and alcohols C8 to C12. Although known for a very long time the special value of these compounds in perfumery was only realized comparatively recently. The higher aldehydes in particular have the property of imparting a vital note when present in traces in perfumery compounds and are therefore now indispensable. The higher alcohols (octyl, nonyl, decyl, undecyl and dodecyl) and the corresponding aldehydes, which also occur to some extent in essential oils, are prepared from the fatty acids present in coconut oil and castor oil. For some time now the acetals such as phenyl-acetaldehyde dimethyl acetal and similar compounds have been receiving attention owing to their greater stability as compared with many aldehydes which renders them particularly suitable for soap perfumes. *C. Bournol, Chem. Prod.*

MASTIC OILS

Mastic gives, by steam distillation, an almost colorless oil (yield 1 to 3 per cent.) This oil has an aromatic, hot, and powerful odor; strongly diluted, it has the taste of the original gum. It is not used at all in perfumery and has only limited use in flavor compositions. The composition of this oil has not been investigated to any extent and the only products identified have been inactive and dextro-rotatory alpha pinene.

The resinoids obtained by treating mastic tears with various volatile solvents used in perfumery have been more successful than the essential oil. These are relatively cheap fixatives possessing a certain orginality and giving interesting results in soap making and even in the manufacture of deluxe extracts.

By the steam distillation of the leaves of Pistacia lentiscus, an essential oil is also obtained, which was described for the first time in 1913. Its principal constituent is also pinene. By distillation of small twigs of mastic, a very small yield of an essential oil is obtained.

This very fluid, green tinted essential oil at first has an odor of turpentine but then a green aldehyde note which is very tenacious. This oil has been ignored by most perfumers but is certainly not without merit. *G. Igolen, Rev. des Marques.*

BENZYL ESTERS

Benzyl acetate is a condensation product of benzyl alcohol and acetic acid. It can be prepared from benzyl chloride by means of fused potassium or sodium acetate and glacial acetic acid, but a better method is to acetylize benzyl alcohol with acetic acid anhydride. According to the method of preparation adopted, and subsequent methods of purification, synthetic chemicals are liable to contain traces of impurities. Sometimes the proportion of these may be very minute; nevertheless, in many cases, they have an adverse effect on the odor.

Benzyl acetate is a colorless oil, with a fresh, fruity odor strongly suggestive of that of jasmin. The odor may not be appreciated when the substance is smelled for the first time, owing to the fact that it is rather strident.

In the natural perfume of the jasmin flower, this stridency is toned down by the odors of the other constituents present. Benzyl alcohol (which is only weakly odorus) and linalol moderate it, while the jasmone and indole have very marked effects. As a substitute for the latter in practical perfumery, alpha-amyl-cinnamic aldehyde has found much favor in the building up of inexpensive artificial jasmin perfumes. Linalol and methyl anthranilate are also desirable additions, and are among the constituents of the natural perfume material.

The utility of benzyl acetate, however, is by no means limited to the building up of artificial jasmin perfumes. It is useful in numerous other perfumes of a floral type, such as tuberose, jonquil, lilac, etc., and, indeed, might be described as of almost universal utility for giving to various compositions a note of fruity freshness.

Many other esters or benzyl alcohol are manufactured. Those akin to benzyl acetate include benzyl formate, propionate, and *iso*-butyrate. The stridency of the odor of the formate makes it rather difficult to handle and beginners should avoid it. Benzyl propionate is useful, as its jasmin-like odor is softer than that of the acetate. The odor of benzyl *iso*-butyrate is rather heavy and fatty.

Benzyl benzoate may be mentioned. It is almost odorless and forms a useful solvent and diluent. It is much employed for diluting compounds to meet the demands of those users who insist on cheapness, irrespective of concentration. *H. S. Redgrove, Manuf. Perf.*

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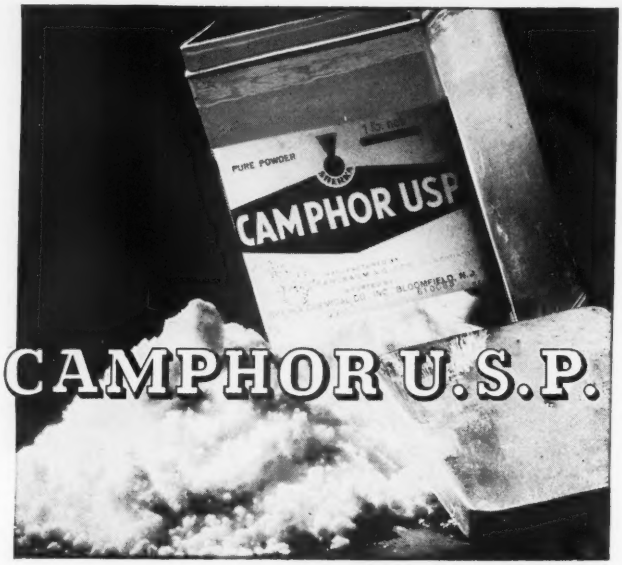

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ADVANCING THERAPY

SULFANILAMIDE DERIVATIVE FOR TUBERCULOSIS

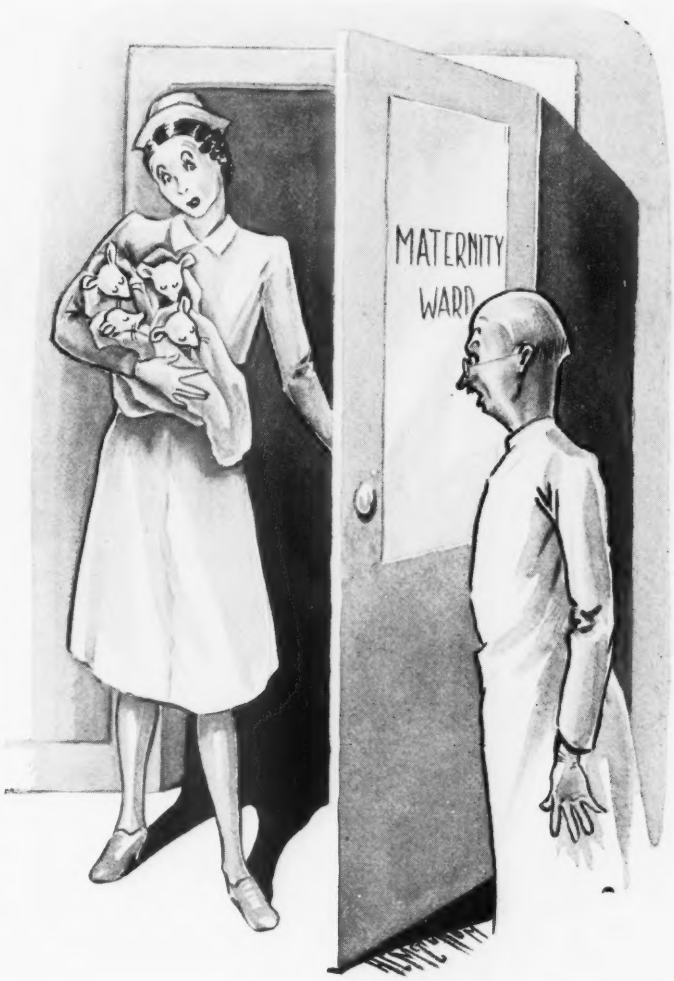
A new synthetic drug, composed of sulfanilamide and a fat component of cocoanut oil, found to prevent the growth of tuberculosis germs in test tubes, and to check the disease from developing in guinea pigs that had been inoculated with large doses of a human strain of the tubercle bacillus, was reported before the annual Spring meeting of the American Chemical Society.

The report was presented by Dr. M. L. Crossley, research director of the Calco Chemical Company of Bound Brook, N. J., in collaboration with Drs. E. H. Northey and Martin E. Hultquist. They emphasized that their work had been done so far entirely on animals, and that the preliminary results reported by them "do not in any way permit any conclusion at the present time as to their efficacy in the treatment of diseases in man."

The tests so far indicate that the new drug produces its effect by penetrating the wax armor plate of the tuberculosis germs. Since the bacillus of leprosy also belongs to the wax-coated type of germ, known as acid-fast bacilli, the new drug opens up the hope that science may have found a double-edged sword with which to fight two of the most dreaded enemies of mankind, whose protective armor has so far made them impervious to attack by chemical means.

The new compound carries the chemical name N-1-dodecanoly-sulfanilamide.

"The new drug has the properties of both its parents (sulfanilamide and fat component)," Dr. Crossley reported, "in that it penetrates the fatty tissues of the body carrying the therapeutic properties of the sulfanilamide. In studies on experimental animals it has shown a definite superiority to sulfanilamide in treating streptococcic infections and tuberculosis.



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"The preliminary tests on animals, carried out by Dr. David R. Climenko, in the division of pharmacological research of the Calco Chemical Company, has shown the dodecanoyl product to be of a lower order of toxicity in comparison with sulfanilamide. It has been used in very large doses in animals without showing any acute toxic reactions.

"In a limited series of experiments with guinea pigs Dr. Climenko has shown that massive doses of a human strain of tubercle bacilli developed only local lesions at the site of the injection, but failed to show any marked generalized manifestation of the disease in animals treated with the dodecanoyl compound.

"Similarly, he has shown that low concentrations of the product are able to inhibit the growth of the organism over a period of ninety days when grown in test tubes.

"One of the characteristics of dodecanoyl-sulfanilamide is its high degree of fat solubility as compared with sulfanilamide. The tubercle bacillus, a member of the so-called acid-fast family of bacilli, is coated with a fatty, waxy pellicle which makes it impervious to a large number of chemotherapeutic agents. The belief that the high degree of fat solubility of this product would enable it to more easily penetrate this waxy pellicle (skin) led us to undertake the study of it in experimental tuberculosis.

"It should be pointed out that the administration of the drug does not cure the disease but rather acts to arrest the spread of the infection and to localize to the site of entry the pathological processes initiated by the tubercle bacilli.

"In view of the promising results obtained with this drug in the treatment of experimental tuberculosis it is suggested, and attempts will be made to demonstrate this experimentally, that the drug may be equally effective in the treatment of other diseases caused by acid-fast bacilli, such as leprosy.

"The dodecanoyl-sulfanilamide is but one of a large number of products studied in the comprehensive investigation in progress in our laboratories. It is hoped that out of this study will come some effective agents for the alleviation of disease.

"Another derivative of sulfanilamide, known as di-sulfanilamide, consisting of two molecules of sulfanilamide joined together, offers promise as a preventive of virus diseases, particularly influenza."

About 300 guinea pigs have been used in the experiments, Dr. Crossley stated. Those guinea pigs used as controls died of tuberculosis in sixty days, he reported. Those receiving the drug, which was generally administered three days following the inoculation with the tuberculosis germs, lived for ten months, at which time they were sacrificed to test for evidence of tuberculosis.

Neither pulmonary nor generalized tuberculosis was found in any of these animals, Dr. Crossley reported, and no evidence was found of the presence of any tubercle bacilli in the system. The original local lesion formed at the site of the injection was apparently isolated and walled up by the body, so that the bacilli were unable to spread and do their damage.

The tubercle bacilli, to which the new drug was applied in test tubes, failed to grow when transplanted to other test tubes containing media upon which the bacilli generally thrive.

Further tests will now be undertaken on animals in more advanced stages of the disease. Much more preliminary work on animals remained to be done, it was emphasized, before clinical tests could be undertaken on human cases by qualified physicians.

The new drug is a solid which can be administered by mouth, provided it is mixed with a fatty substance, such as oil or milk. Otherwise the body is unable to absorb it. In addition to its component of cocoanut oil, some other organic acids containing a similar number of carbon atoms might be used in the preparation of the new drug.

SEX HORMONE OINTMENT

Ointments containing testosterone propionate, male sex hormone, are now available in easy-to-use one dose capsules called Dosules. These capsules are made of thin gelatin in the form of an ampoule; when the hollow neck is cut with scissors, the ointment can be conveniently squeezed out for application. The ointment is recommended for use in specific conditions where it is known to be of value and the ointment form is a useful method of maintenance dosage. *Roche-Organon, Inc.*

VITAMIN B_6 SYNTHESIS

Complete synthesis of vitamin B_6 has been accomplished by Doctors S. A. Harris and K. Folkers of the Merck Research Laboratories at Rahway, N. J.

This achievement represents the most recent result of researches which have led to the identification and synthesis of several individual components of the vitamin B complex. Accomplished within a relatively short time after Williams and Cline synthesized Vitamin B_1 Hydrochloride in the Merck Research Laboratories in 1935, the synthesis of vitamin B_6 adds another pure crystalline factor to the group further represented by vitamin B_1, nicotinic acid, and riboflavin.

Vitamin B_6 is known to prevent or cure an acrodynia-like dermatitis in the extremities of young rats as well as a form of severe microcytic hypochromic anemia in puppies. Owing to the limited amounts of the substance which hitherto have been available, it has not been possible to conduct adequate clinical work to determine its possible efficacy as a therapeutic agent in the treatment of human deficiency conditions. But as a result of the synthesis, it is expected that experimental quantities of this vitamin will be available for the first time to permit qualified clinicians to study its effects on humans.

The synthesis, accomplished by Drs. S. A. Harris and K. Folkers in the Merck Research Laboratories, starts from chloracetic acid and acetone.

Previously the structure of the vitamin had been elucidated by Merck as well as by continental investigators. Also known as "adermin," it occurs as part of the B complex in yeast, rice polishings, liver, etc. Because it is extremely difficult to isolate in the pure state from these sources, only insignificant amounts, have hitherto been available. Vitamin B_6 is present in the B complex as part of the thermostable component. It occurs together with riboflavin and nicotinic acidin the so-called adsorbed portion of this component.

The vitamin was isolated as its hydrochloride, which is a white, crystalline, thermostable powder, soluble in water, inert to atmospheric oxidation and not readily attacked by acids or alkalies. Pharmacological tests have shown the synthetic product to be identical with that obtained from natural sources. It not only produces a cure of acrodynia-like dermatitis in rats, but, like all vitamins, stimulates growth.

NICOTINAMIDE FOR PELLAGRA

Alport and his associates treated fifteen patients with pellagra and dermatitis, and two with presumably, pellagrous stomatitis with 1 Gm. orally or 0.5 Gm. by injection of nicotinamide. The acute lesions of the mucous membranes were promptly and rapidly improved. Improvement in the acute cutaneous lesions was slower. Chronic cutaneous lesions in friction areas and chronic atrophic changes in the tongue were only slightly affected. The appetite, mental condition and general physical health of all the patients were improved by the treatment. Headache, itching and warmth of the skin followed treatment of four patients and one patient had colic after the administration of 1 Gm. of nicotinic acid, but the same dose of nicotinamide given two patients led only to transient headache. *Lancet, vol. 2, p. 1460.*

COPPER FOR TUBERCULOSIS

The author records his observations on twenty cases of pulmonary tuberculosis in patients aged from 24 to 64 who were treated by weekly intravenous injections of 5 cc. of double cyanide of copper and potassium. He found that favorable results were obtained in early cases and in those running a slow course. No symptoms of intolerance were observed in the form of digestive or renal disturbances or skin eruptions such as may occur in treatment by gold salts.—*N. Bonarrigo. Rass. Fisiopat. Clin. Ter.*

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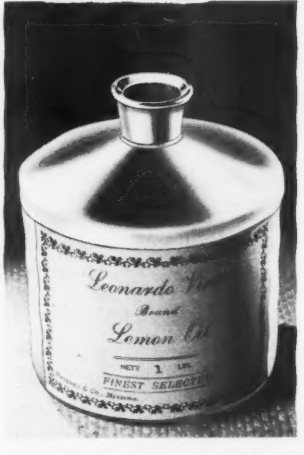

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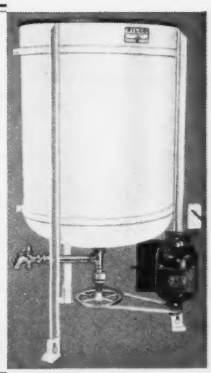

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READERS'

LANOLIN CREAM: Will you please tell me how I may incorporate a fair amount of lanolin in a cream without having trouble with separation of the lanolin at the surface, with the appearance of discoloration? I wish to use this material because I know that it is very valuable in any type of skin treatment. Chicago.

Discoloration that sometimes appears in poorly made creams can be avoided by making sure that stirring is very thorough and the cream is completely homogeneous. Under these conditions a good grade of lanolin is completely hydrated, has its greatest value for the skin, and will not separate at the surface to give the appearance of discoloration.

ASTRINGENT LOTION: I have been reading your magazine for quite a while and have found it to be always interesting and educational. The "Readers' Questions" department is of exceptional interest and help to me. Have you a formula for an astringent which does not call for a large quantity of alcohol? Any suggestions that you may wish to forward will be deeply appreciated. New York.

The use of alcohol is not necessary in astringents except as a solvent for the perfume used. If you wish, you may use witch hazel, more or less diluted, as your base. The active astringent should be about one per cent. of aluminum sulfate or aluminum sulfocarbolate. The ethyl ether of diethylene glycol, or a small amount of alcohol, may be used as the perfume solvent.

HAIR LACQUER: I am interested in knowing the formula of hair lacquer also what oil to use for bleaching hair. I have tried castor oil but it does not congeal. I have been informed that you give this service. Chicago.

Hair lacquer formulas were described in a previous issue of this magazine. We unfortunately do not know what oil can be used for bleaching hair, but strongly suspect that castor oil can not be so used.

SKIN TONIC: Can you provide us with a suggested formula using tincture of arnica flowers in a skin tonic for greasy skins? Johannesburg.

A suitable formula can be made by using tincture of arnica in place of some of the water and alcohol ordinarily used in skin tonics.

Tincture of arnica	25.0
Alcohol	5.0
Zinc sulfate	0.5
Water	69.5

GLYCERIN SUBSTITUTE: One of our clients is using glycerine in a product, a liquid toilet preparation and recent tests have shown that glycerine acts to retard skin absorption (to some extent) of the active ingredients of the formula.

We understand that within the last two or three years, several synthetics to take the place of glycerine have come into the market and we wish you would give us the name of a manufacturer of such synthetics. Much care would have to be used in any substitution as the physical appearance of the preparation can not be altered when finished ready for shipping, from the present appearance, but we would like to aid in finding something which would have the same characteristics as glycerine generally, without inhibition of skin penetration. Binghamton.

An effective substitute for glycerin that is very similar to it in general qualities, is sorbitol. The ethyl ether of diethylene glycol may also be used for the purpose but its solvent properties are somewhat different from those of glycerine and its use may alter the preparation.

HYDROQUINONE ANTIOXIDANT: I have tried to add hydroquinone to olive oil as an antioxidant and find that it does not dissolve even after being thoroughly mixed but settles to the bottom of the container. Is there any special procedure that must be used? Dayton.

Hydroquinone in the amounts necessary for antioxidant action, that is, about one-tenth of one per cent., can easily be dissolved in ordinary oils by the application of gentle heat.

SILVER HAIR DYE: I have been putting up a preparation for gray and faded hair for several years based on ammoniacal silver nitrate. To comply with the new Food, Drug and Cosmetic Act, I changed the wording on my label to read as follows: "Indicated to impart color to Gray and Faded Hair. (Do not expect immediate results, as it takes several applications for the desired effect.) Follow directions carefully. Contents 2 fl. ozs." I also paste a poison label on each bottle like the one inclosed. Can I continue selling this preparation in interstate commerce with this correction? Baltimore.

As far as we can judge from the carton you sent us and your proposed changes, you are complying with the new regulations. To be absolutely on the safe side, however, you had best send a sample of your new carton to the Food and Drug Administration in Washington, D. C.

QUESTIONS

BROMO ACID: I am interested in the amount of bromo acid to be used in a lipstick and directions concerning its use in this connection. I would appreciate any information you can give me. Colombia, South America.

Not more than two per cent., of bromo acid is required in a reasonably permanent lipstick. The dye is thoroughly ground with castor oil in order to get as much as possible in solution. The stirred mixture of castor oil and dye is melted with the other oils and waxes used to make up a lipstick.

DEODORANT AND ANTIPERSPIRANT CREAM: We will greatly appreciate receiving a formula for a non-greasy type deodorant and antiperspirant cream. Memphis.

A non-greasy deodorant cream can be made according to the following formula:

Glycerol monostearate	12
Glycerin	5
Methenamine	3
Water	80

Dissolve the methenamine in a small amount of water. Heat the glycerol monostearate, glycerin, and water together and stir until a homogeneous cream results. Add the methenamine solution and stir until cold. This is solely a deodorant cream without antiperspirant properties. To make an antiperspirant cream of the type you desire, requires the use of special glyceryl monostearate cream bases for manufacturing acid creams. About five per cent. of aluminum sulfate or aluminum sulfocarbolate are used to stop perspiration.

CALAMINE LOTION: In the process of manufacturing a Calamine lotion N. F. VI, can you suggest a process that will keep the prepared Calamine and Zinc Oxide in complete suspension, so that there will be no "settling out" of these two items? Philadelphia.

The best way to prepare a pigmented lotion that will not settle is to make a liquid cream in which the pigments are so well dispersed that they will settle only very slowly. In this case, however, you cannot use ordinary liquid cream formulas since the zinc oxide will react with the soap emulsifying agent and the emulsion will be destroyed. You may be able to make the lotion you wish from cetyl alcohol one part, sodium lauryl sulfate 0.5 parts, glycerin five parts and water to make one hundred. These are melted together and thoroughly homogenized. Grind the finished lotion with the calamine powder and then to increase stability incorporate about one half per cent. of a gum.

LOCAL ANESTHETICS: I would appreciate it very much if you could tell me the relative effectiveness of the following topical anesthetics in one per cent. solution: (1) menthol, (2) chlorobutanol, (3) ethyl amino benzoate, (4) propyl amino benzoate, and (5) iso-butyl amino benzoate. Would a two per cent. solution be much more effective than a one per cent. solution? Would a 0.001 per cent. concentration of epinephrin prolong the anesthetic properties well enough to warrant its use? Indianapolis.

Since you do not say in what form you wish to use a local anesthetic, whether in aqueous or non-aqueous solution, it is not possible to give you a very full answer. Menthol has practically no anesthetic effect and chlorobutanol alone has very little value. Chlorobutanol, however, is more effective when used along with ethyl amino benzoate. In any case, a stronger solution will be more active than a weaker one. The addition of epinephrin is entirely unnecessary for topical anesthesia. The activity of the amino benzoates is generally considered to vary with their solubility, that is, the ethyl compound being the most active in aqueous solution, while the iso-butyl compound is most active in oil solutions.

INCREASING ADHESION: Please tell us what we can add to petrolatum to make it cohesive. Beeswax and paraffin wax do not give the properties that we desire. Des Moines.

The properties of petrolatum can be changed by the addition of lanolin, or lanolin may be used alone for the greatest cohesiveness. Certain gums used in paint such as dammar might also be used for the purpose.

POTASSIUM ARSENATE: I recall in one of your issues of several years ago, you mentioned the use of potassium arsenate in a hair tonic. Could you tell me the proper proportion of this material to use as a dandruff solvent? Cleveland.

Potassium arsenate is not a dandruff solvent; its only use in a hair tonic would be as an antiseptic and there is no reason why this poisonous compound should be used for that purpose.

MAKEUP CREAM: We are interested in obtaining a formula for a cream which is used for summer makeup or as a powder base for evening use. What we have in mind is a thick product with very high covering power which is to be made up in various shades. Milwaukee.

A product such as you have in mind can be made by grinding zinc oxide or titanium dioxide with petrolatum to form a smooth paste of the proper consistency. Proper color should be added to the white pigment before the grinding and consistency can be altered by the addition of mineral oil.

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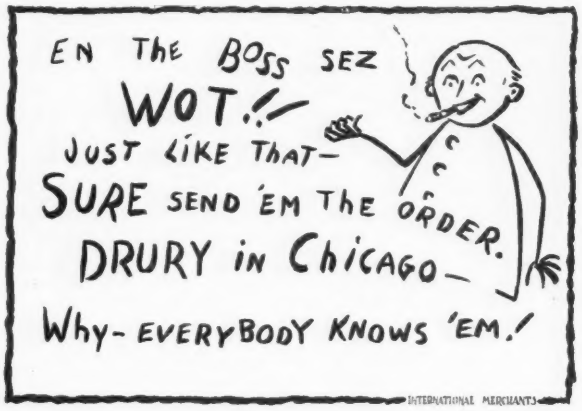

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Cajuput oil 6c
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Java 2c
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Dandelion root 1c

Geranium oil, African 5c
Bourbon 30c
Lycopodium 10c
Mercury bichloride 6c
Calomel 8c
Red Precip. powd. 10c
White precip. 10c

Oleoresin capsicum 5c
vanilla $2.00
Sage oil, Dalmatian 5c
Santonin $2.00
Senega root 13c
Thyme oil, white NF 15c
Vanilla beans, Bourbon 25c
Mexican cuts 25c
Mexican whole 25c

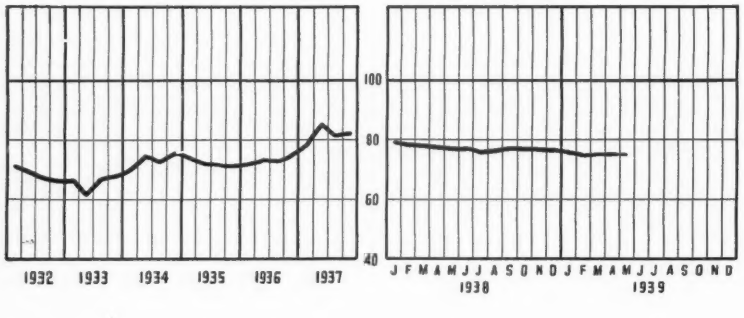
Down

Asafoetida 2c
Balsam Tolu 3c
Cade oil 10c
Camphor, Japanese ½c
Candelilla wax ¼c
Cascara sagrada 1c
Cassia oil, Redist. 6c
Citric acid 1c
Cod liver oil $1.00
Coriander oil 25c

Damiana leaves ½c
Ephedrine alkaloid 40c
hydrochloride 25c
sulfate 25c
Ergot 5c
Gentian root ½c
Ginger oil 25c
Golden seal root 15c
Grapefruit oil 35c
Hemlock oil 10c

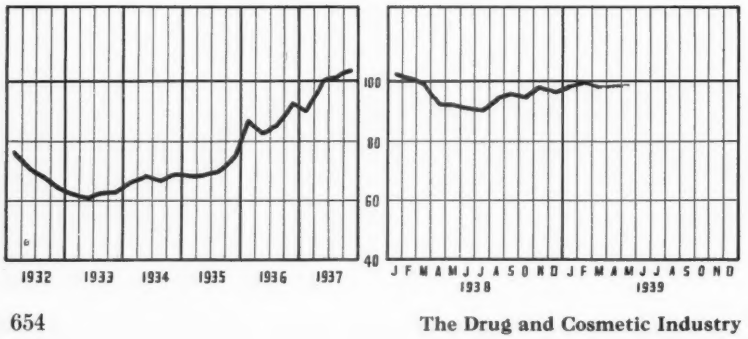
Lemon grass oil 2c
Menthol 2½c
Orange oil, W. Ind. 5c
Italian 25c
Peppermint oil, Natural 15c
Redist. 20c
Rhodinol 40c
Rue herb 1c
Spruce oil 10c
Wahoo bark of root 1c
Wormseed oil 20c

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



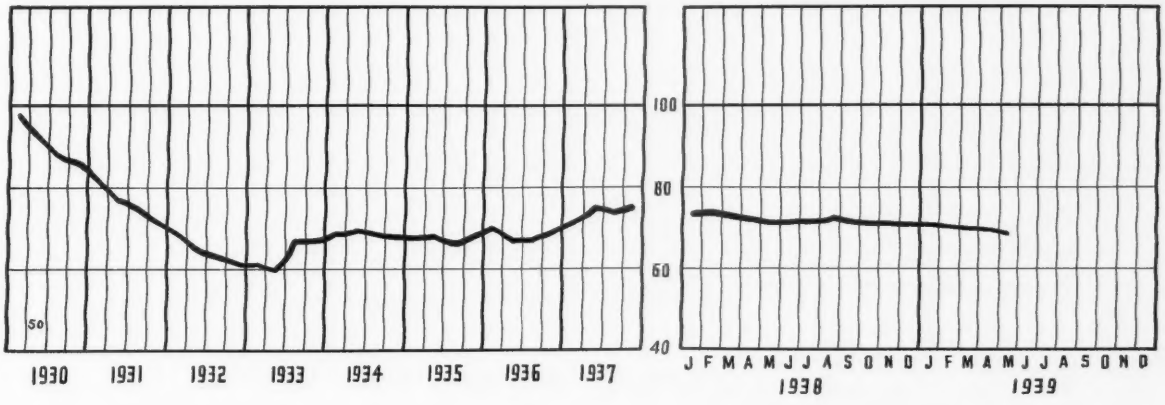
The cosmetic raw materials index declined very slightly from 75.0 to 74.9. Balsam tolu lost 3 cents to reach 45 cents; candelilla wax declined from 15½ to 15¼ cents; menthol declined from $2.97½ to $2.95. There were no indications that the Japanese menthol market had changed insofar as their price attitude was concerned, the decline being attributed to manipulation.

15 Botanicals—Weighted Price Index. 1926 = 100.



The botanicals index increased slightly from 98.3 to 98.7. Agar increased from 95 cents to $1.00; balsam tolu declined from 48 to 45 cents; ergot declined from $1.40 to $1.35; gentian lost one-half cent to be quoted at 7 cents; rhubarb increased 3 cents to 48 cents. At this writing the market for agar is exceptionally strong and further advances are anticipated.

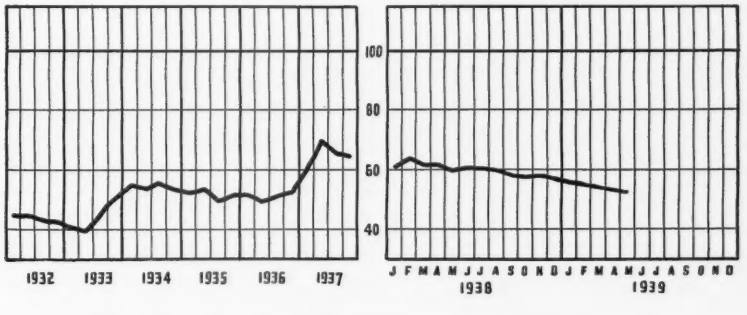
50 Raw Materials—Weighted Price Index. 1926 = 100.



The index of 50 commodity prices declined from 69.1 in April to 68.3 for May 1939. Considerable war talk during the past month failed to have any effect on the market for drug and cosmetic raw materials. It is important to note that reports from Washington indicate the possibility that the United States is likely to apply to Italy and Japan the extra import duty of 25 per cent. which was recently imposed on all German goods. Germany is not now so important a supplier of raw materials to this market but Italy and Japan furnish a considerable variety of such items.

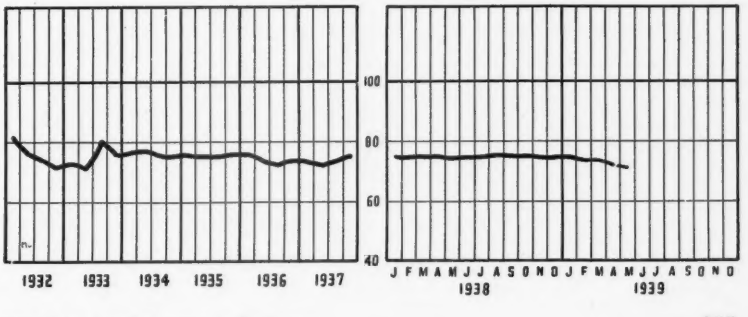
15 Essential Oils—Weighted Price Index. 1926 = 100.

The essential oil index of prices declined from 53.4 to 52.3. Anise oil rose from 70 to 71 cents; cassia oil declined from 95 to 89 cents; citronella oil was 2 cents higher at 34 cents; geranium oil rose from $2.65 to $2.70; lemon oil declined from $2.65 to $2.50; peppermint oil declined from $2.30 to $2.15. The current trading period witnessed the first reaction in geranium oil from the low levels reached by this item.



15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.

The medicinal chemicals index declined from 72.4 to 71.4, five price changes averaging a net decline. Bismuth metal increased from $1.00 to $1.10; citric acid decreased one cent to 21 cents; cod liver oil was one dollar less a barrel at $21.00; menthol lost 2½ cents to be quoted at $2.95; mercury metal increased from $89.00 to $95.00 a flask.



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For oils and creams	20%	65c lb.
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A sharp rise in mercury metal, which placed domestic material at the new high level of $95.00 per flask and imported material at $105.00, made necessary the revision of mercurials. Although prices for the minor salts remain unchanged it is most likely these too will be revised more in line with the present cost of the raw material.

With the Spanish Nationalists' defeat of the Republican Government control of the Almaden mines passes to the Government to be set up by General Franco. Throughout the war the Republican Government prevented capture of the mines by the Franco forces. Prior to the revolution, working agreements between the Italian and the Spanish mines had been in effect. During the revolution the cartel arrangement was abandoned.

It is reported from Rome that negotiations have been started between the Burgos Government and Italy for the conclusion, after the restoration of settled conditions in Spain, of a new agreement between the Italian and Spanish mercury-mining industries. This agreement, it is reported, will follow largely on the lines of the former "Mercurio Europeo" understanding which regulated output and prevented competition in overseas markets. The position of Spanish mercury in the world markets when Franco shall have organized his new Government will play an important part in the future movement of prices in Europe and the United States.

EUCALYPTUS OIL

There was no further change in the spot market price of eucalyptus oil although the situation was such as to warrant higher prices. Reports from Australia indicate drought reduced the crop of leaves from which oil most preferred in this country is made and serious brush fires further decimated the young growth of eucalyptus trees. While the price range here continued at from 36c to 40c per pound it was said that similar quality material in Australia easily commanded 38c per pound or better. This is the dull season here as far as consumption of oil is concerned and this is the only reason why prices have not more fully reflected conditions in the producing country.

EPHEDRINE

A rather sharp decline featured the market for ephedrine salts, the alkaloid being off 40c per pound to $1.85 in 100 oz. lots. Hydrochloride and sulfate was reduced 25c per pound with the 100 oz. lot price now $1.35.

There were several reasons given for the easier trend in ephedrine. Ma huang is in plentiful supply, in fact despite the unsettled conditions in the principal foreign market for this raw material, importations last year were exceptionally high reaching a total of 1,573,000 pounds—approximately double the imports for 1937. The consuming season for ephedrine products is now closed and the market will remain more or less dormant until next Fall. Another reason given for the reduction in ephedrine was the desire of manufacturers here to forestall possible foreign competition.

The prediction of future trends in any chemical product is always dangerous because of possible contingencies. However, it can be pointed out in the case of ephedrine, that raw material is now in ample supply and the price of ephedrine salts is still above a normal price range.

COD LIVER OIL

The spot market for cod liver oil was down to from $21.00 to $22.00 per barrel, thus extending the decline that has been caused by the large catch of fish and the excellent yield of oil per liver. While some large forward buying was noted in Norway and other producing centers this had no effect in creating firm prices in the primary markets.

Reports from Norway indicate that fishing continued to be favored by fair weather and results were very satisfactory. Up to March 11 the catch and output of cod liver oil in the whole of Norway amounted to 80,146 tons of cod and 38,244 hect. of cod liver oil. This compared with 44,710 tons of cod and 19,364 hect. of cod liver oil on March 12, 1938 and 57,766 tons of cod and 31,067 hect. of cod liver oil on March 13, 1937.

According to official figures from Norway, exports of medicinal cod liver oils to the United States aggregated 207,914 gallons in January, compared with only 33,870 in the corresponding month of 1938. In some quarters it is felt that the large shipments of medicinal oil to the United States in January might upset the American market, and another disturbing factor is news that certain old American customers are now purchasing their supplies from Hull, England.

CASSIA OIL

Considerable spot competition resulted in a decline in the price of cassia oil. The range is now from 89c to 94c per pound. While this oil fluctuated considerably during the period of strife in China it is interesting to note that the highest level reached was shortly after hostilities began and that $1.30 per pound was the top price during the Fall of 1937. The present price of 89c in drums is, therefore, quite favorable and it might even be said to be slightly below normal for this item.

Reexports of cassia oil from Hong Kong, the port through which most of the cassia oil produced in South China passes, declined sharply last year, owing to disturbed conditions in the South China area. Reexports of this oil from Hong Kong aggregated 285,795 pounds during the year, which compared with 410,000 in 1937 and 363,000 in 1936. Almost half of the total, or 138,499 pounds, went to the United States.

Following Japan's South China invasion in October, and the closing of the West River and the Kowloon-Canton Railway to traffic, cassia oil quotations at Hong Kong rose sharply. The only outlets for cassia oil following October were via Kwangchow Wan and Haiphong and as the water routes from Kwangsi and Kwangtung Provinces toward Tonkin could not be used, owing to lack of rainfall, oil had to be transported overland by coolies, a method which was both expensive and unsafe.

It has been noticeable that war in various countries supplying raw materials to this market have not been nearly so upsetting from both the price and supply standpoint as was heretofore the case. It might be said that cassia oil is an argument in point because not only is the present price of this item favorable but importations, although registering a decline, are still entirely adequate to supply existing requirements.

GUM TRAGACANTH

In the main reports indicate that the primary and spot markets for gum tragacanth were well maintained during the current trading period. Firmness surrounded prices named in most quarters and there was a lack of anything that suggested an early change in favor of buyers for consumption.

The gum tragacanth monopoly has been modified to the extent of permitting each of the authorized regional companies to purchase gum throughout Iran, reports indicate. Prior to this modification, each company has been restricted to operating in a specified region.

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ANISE OIL

The situation in the Far East as relating to anise oil has not cleared up much. The fact was that offerings of replacement goods were not very numerous nor were they received often. Prices at the source were apparently firm and this was reflected in the spot market which rose 1c per pound to a range of from 71c to 76c as to quantity.

Reexports of anise oil from Hong Kong aggregated 355,511 pounds valued at $231,582 last year, which compared with 445,755 pounds valued at $275,300 in 1937. Reexports to the United States amounted to only 24,660 pounds valued at $17,770 in 1938, which compared with 119,827 pounds valued at $81,700 during the preceding year.

Hong Kong anise oil prices varied considerably in 1938, owing to disturbed conditions in South China, the region from which Hong Kong obtains its supplies of this product. At the beginning of the year anise oil was being quoted in Hong Kong at about $110 per picul (133 1/3 pounds), following which prices declined gradually to $87.50 in April and May and to $72.50 in September.

With the Japanese occupation of Canton in October and the closing of the West and Pearl Rivers, prices rose to $93.60. During December, however, the arrival of supplies from South China, via Haiphong, together with slack demand from abroad, caused prices to decline to $81.50 per picul.

MENTHOL

The Japanese market for natural menthol continued firm and unchanged, although a slightly easier tone was noted on spot. Case lots are now offered here at $2.95 per pound, this price representing a decline of 2½c from previously quoted levels. Spot stocks are heavy, particularly in one quarter. Import manifests show a steady consignment of material to this supplier. This material is evidently being held as an investment, but so long as this rather large quantity of spot menthol—estimated as much as 500 cases—remains unsold, it is sure to have a deterrent effect on prices.

Synthetic menthol continues to meet with favor as the volume of material going into consumption is reported as steadily improving. In the event of a world war it is comforting to think that the United States has an industry making synthetic menthol, although it must be born in mind that citronella oil is the raw material and must be imported in steady quantities to keep domestic production of synthetic menthol going. Another point of interest in this market is the fact that natural menthol at the new price of $2.95 per pound is now quite competitive with the synthetic which ranges from $2.25 to $3.00 as to grade and quality.

GLYCERIN

The market for glycerin remained steady to firm during the current trading period. Full prices prevailed for both the crude and refined material and conditions seem to favor the maintenance of prevailing schedules. Until the world becomes reasonably sure that there will be no war, or until the race for armaments supremacy subsides to some extent, the market for crude glycerin will be influenced thereby.

The question whether synthetic glycerin can be produced competitively is therefore of considerable interest. The relative cost of glycerin by fermentation from sugars is such that it can only be conducted as a war-time necessity. In the United States, blackstrap molasses is the lowest price source of fermentable sugars. The direct cost of refined fermentation glycerin is approximately 12c per pound and therefore glycerin so produced could not be competitive with the by-product of the soap industry at the present time.

Blackstrap molasses has been available from Cuba and Puerto Rico at less than half the price of United States blackstrap molasses. At the price at which the material from Cuba and Puerto Rico is obtainable fermentation glycerin becomes a commercial practicability. This is most promising in Puerto Rico, where it may be made cheaply, but the factors militating against such an enterprise are, first, the heavy investment in the present plant and, second, the strong possibility that the large producers of glycerin from fats would agree to reduce their prices to extremely low levels.

VANILLA BEANS

Earlier predictions of a $6.00 vanilla bean market by mid-summer seem well on the way toward realization. Current prices were marked up 25c per pound all along the line with the price range for Bourbons now from $5.50 to $5.90, Mexican cuts $5.25 to $5.50 and Mexican whole beans $5.50 to $5.75 per pound.

Leading suppliers of vanilla beans report an increase in demand during the past month. This can be construed only as an undesirable development as the supply position is such that only moderate consumer requirements can be had without undue disturbance to the market. Present stocks must last until another crop is collected some months hence. Both spot and primary markets are well sold up so that should the consuming season just ahead prove only a normal one the strain on existing supplies might well put prices above what factors feel is already too high.

CITRUS OILS

There were several price fluctuations in lemon oil of late, the final revision of California coldpressed oil placing the market at $2.40 per pound in 25 pound cans. Italian lemon oil is now offered at from $2.50 to $3.25 as to quantity and brand. As far as orange oil is concerned there seems to be ample supplies to meet any emergency which may confront this market during the heavy consuming season just ahead. In the event of trouble abroad American producing centers are entirely capable of supplying domestic requirements.

Mid-winter windstorms sharply reduced the California orange and lemon crops and prices advanced in consequence. Five million boxes were pared from the California orange crop and more than half a million boxes of lemons. Nevertheless the total supply is larger than a year ago, but the supply of summer oranges will be slightly smaller than in the summer of 1938.

Latest estimates put the total 1939 orange crop the country over at 75.9 million boxes compared with 74.5 million produced last year. Total production of lemons was indicated at 10.7 million boxes compared with 9.4 million last year.

The large supply of citrus and the low prices resulted in larger exports this winter than in the two previous seasons. Total exports for the marketing year may set a new high record. Exports of oranges from November through January totaled 1.5 million boxes compared with 859 thousand in the like period last season. Possibly 15 million boxes of oranges will be exported during the entire marketing season.

CITRIC ACID

The price of citric acid was again reduced by 1c per pound to the basis of 21c per pound. This is a new low level for citric and is a continuance of the policy of manufacturers to pass along to consumers the lower production costs made possible by a continual increase in consumption. Quotations under the new schedule were for prompt shipment only, no contracts being written at present.

CAMPHOR

Quotations for Japanese camphor were lowered to the basis of 48½c to 49½c per pound for powder and slabs and 53c to 54c for tablets. The call for tablets was reported excellent. Domestic manufacturers of synthetic material in tablet form stated they were unable to fill all business offered. This was not due to the lack of camphor but because of the difficulty in cutting or moulding the article to satisfactory shape. That, however, is no new problem for the home makers.

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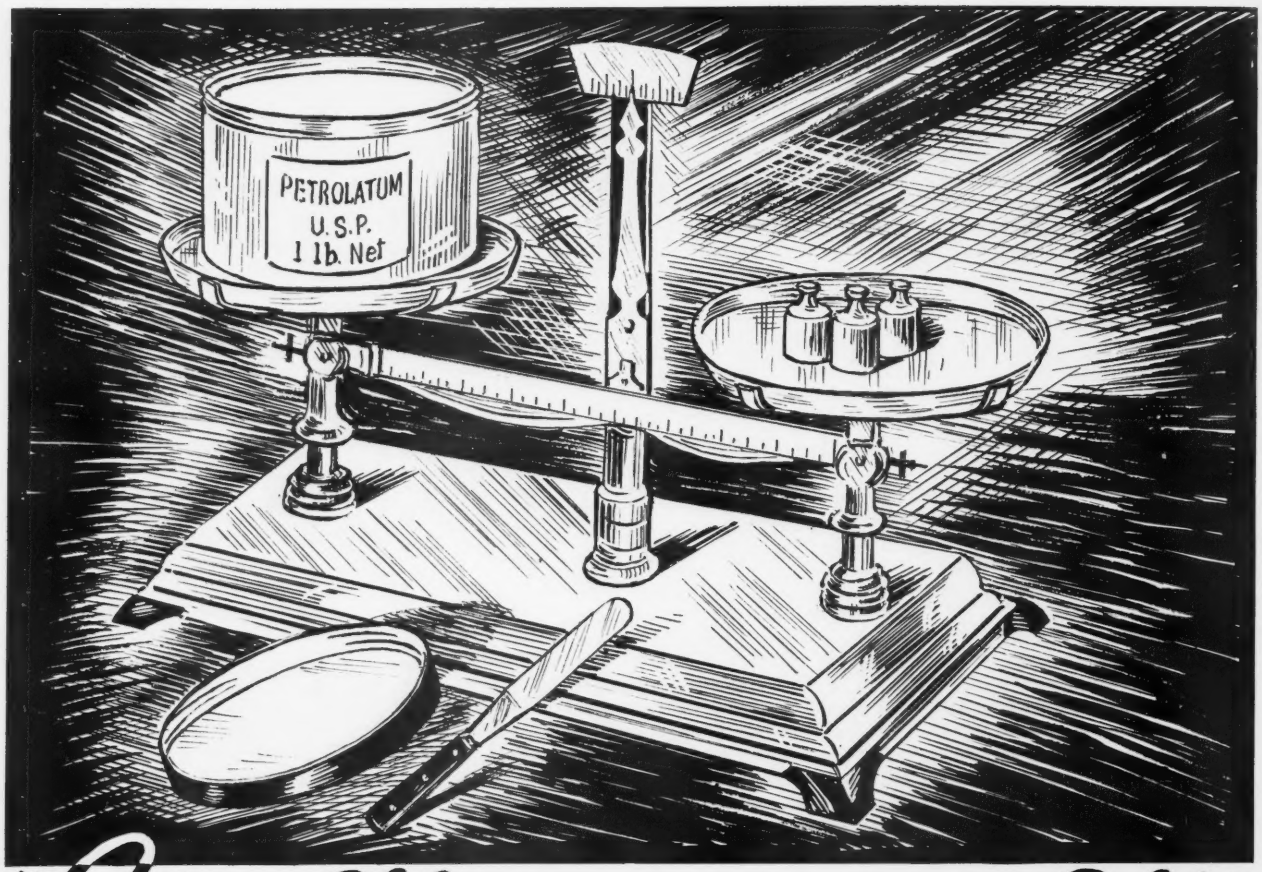

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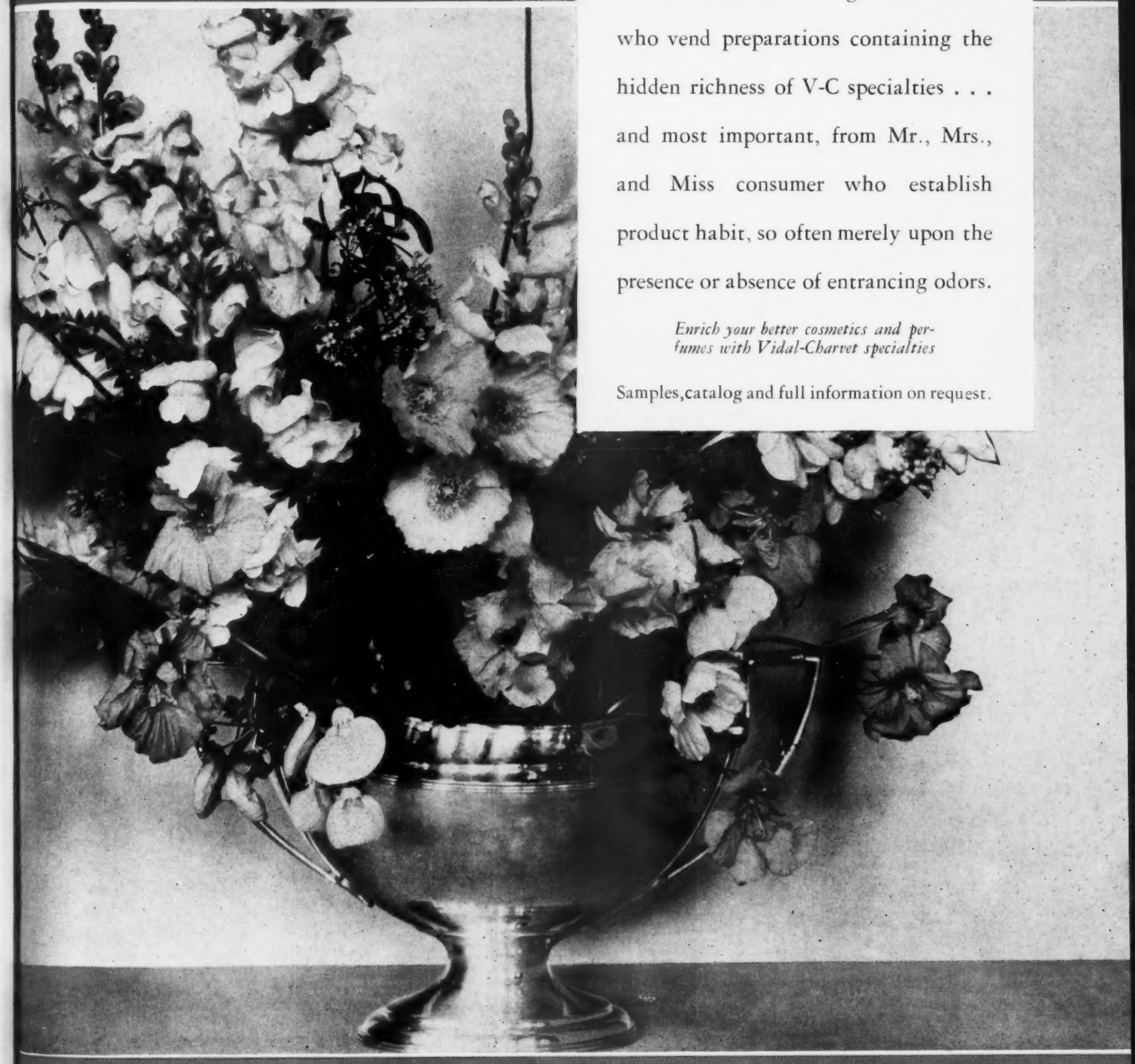

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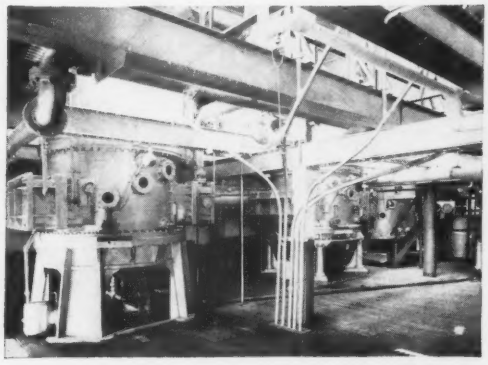

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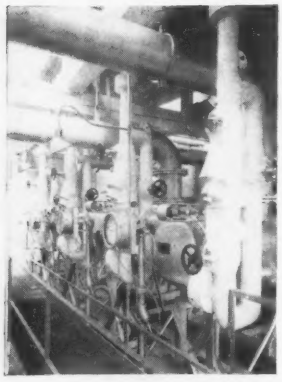
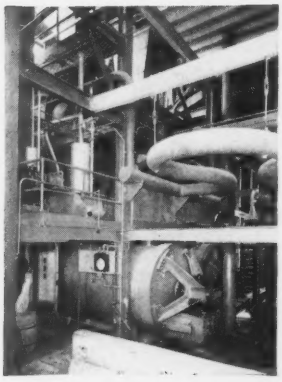


CONTROL

CONTRIBUTING FACTORS



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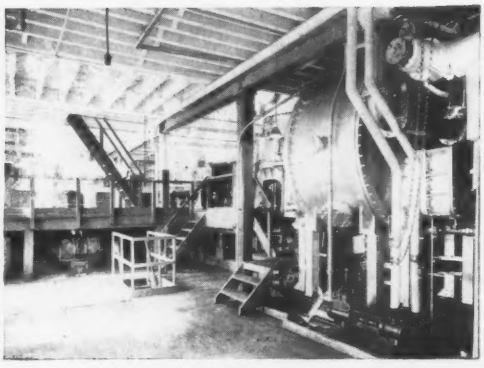

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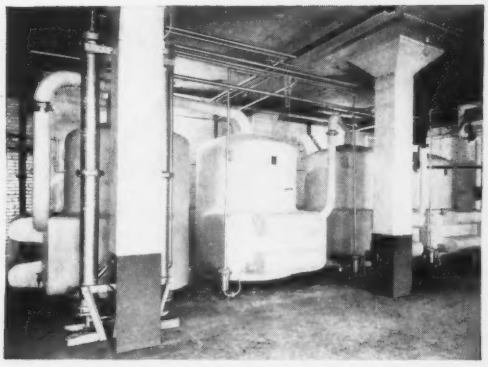

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